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STANDARD

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IN THE

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THE INTERNATIONAL INSTITUTE

FOR PRESERVING AND PERFECTING THE ANGLO-SAXON WEIGHTS AND MEASURES

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# THE INTERNATIONAL STANDARD

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## BIBLICAL ASTRONOMY.

It has been noticed in all ages, that the imagery of the Bible is largely based in a science of the stars that has been little understood even by scholars in modern times. That it was tolerably well understood by religious men in many lands before the barbarian invasion and the dark age of our dispensation, there can be no rational question. And even in that very age some knowledge of it was preserved among church writers; so that Picinus, on emblems, has transmitted to us the received sense of several groups among the stars, so that their original significance has never been entirely lost, and the recovery of the whole system of the celestial signs within about a century by such savans as Ghebelin, Dupins and Drummond, both in Europe and America, is not the miracle it might seem to one not previously acquainted with the history of astronomy as a vehicle of theosophical ideas in all past ages.

Still we must go to the men of remote ages for a correct idea of the religious use of astronomy in the times when our Scriptures were preparing; that is, from the first man all down to St. Paul and his cotemporaries. By this means—by their recorded testimony—alone can we show whether the Christian fathers were right in their notices of the old sacred emblems wherein

astronomy has its part, or whether they wrote out merely by their own fancies, or notions not well sustained that were correct in their day; also, whether certain authors in later times have given us a correct account of the astronomical enigmas and emblems whereof they treat. There are two methods whereby this question may be determined. We may begin with the earliest known authors and notice how they use astronomical figures when they have occasion; or we may first enquire, did well-instructed religious men in the Apostolic ages allow that, from remote ages astronomical forms had authoritatively been assigned to religious ideas? If they unanimously declare this to be the received view, there is an end of all controversy, and their testimony must be accepted as final.

Of all that we might cite to show the religious use of astonomic symbols, the two that are at the same time best qualified to testify in the case, and are most accessible to ordinary readers, are Josephus and St. Paul, both cotemporaries, both among the highest religious authorities of their times, and both in possession of every family where correct religious information of the highest importance to the right interpretation of the Scriptures is at all desired.

Josephus, in his 'Antiquities' and in his 'Jewish War' (Ant. 3, 7, 7; War 5, 5, 5), affirms that in the altar service of the Jews everything coincides with the teachings of the celestial sphere; and he makes of this fact a reason why the nations in general should not dislike the Jews and their religious service—since the same thing is true of the altar service among the Gentiles everywhere. This ought to settle the fact that the doctrines and facts involved in the service of the Hebrew altar were also indicated in the aspects of the starry signs, since Josephus was himself a priest in the highest rank next the Pontiff himself, and must have known what he affirmed to be true. So long, therefore, as his testimony goes uncontradicted, it must stand as the current view of the best and most competent men of his time. But you say this Josephus was a Jew, and is notorious for his flattery of the Romans; so that his testimony to facts of this kind is of little worth. Why is it, then, that he was left uncontradicted upon this point by the heathen

writers of his day, who all showed themselves over-inclined to deny the fact of his historic studies in general? The answer must be that they knew his statement of fact concerning the altar service to be correct in every part. If so, then the doctrine of expiations must have been recognized as taught among the star emblems of the sphere by all people alike, by the "Jew first and also by the Greek." This is witnessed in Aries Chrysometllus, that Abarbinal, the last of the great Jewish rabbis of the middle ages, allows to be for the whole world what the paschal lamb was to the Jews at its first institution in Egypt—a sacrifice and expiation for the saving of such as were otherwise in danger of death.

But the authority of Paul, I suppose, will not be disputed among the Christians; and what does he say? In his epistle to the Romans (x, 18) he argues that all nations had in reality known the Gospel from the beginning of the world, though all had not obeyed the Gospel, even among the Hebrews, the most favored race among men; and all this from the words of a certain psalm rightly attributed to the first man, wherein it is said of the heavens, in their partitions (Mesaparin): "Their line is extended out over all lands, and their signs\* unto the end of the world."—(Ps. xix, 4). In turning to the psalm itself we find it a record of the warning of the first man (v. 11, 12), while he had not yet sinned (v. 13, 14). In its opening he begins by saying: "The heavens in their partitions declare the glory of God, and the expanse showeth His handywork." The glory of God is but faintly shown by the mere sight of a few stars, without regard to their disposition in groups. His wisdom and goodness are best shown to the common mind of man by His works upon earth, in the forms and functions of animals and plants, in the balancing of forces and the adaptation of parts; all exceedingly wonderful and infinitely complex in their ramifications over the whole field. But Messiah manifested is the glory of God; and His handywork is the redemption of man and his guarding the universe from the power of evil broken forth and raging upon the earth. But the author

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\*The original may be rendered either "words" or "signs;" among these signs (not among the words) is set the tabernacle of the sun.

proceeds: "Day unto day uttereth speech, and night unto night showeth knowledge. There is no speech nor language;" their voice is not audible. "Their line is gone forth over all lands and their signs unto the end of the world. Among these hath he set a tabernacle for the sun, which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to run a race. His going forth is from the end of heaven, and his circuit is unto the ends thereof; and there is nothing hid from the heat thereof." Here we have the very heavens in their divisions showing the glory of God; and this is identified by St. Paul with proclaiming the Gospel to every creature under heaven (Col. i, 23).

The proof is therefore perfect. St. Paul saw the Gospel indicated in the stars, in their partitions, in the succession of their signs as they rise, culminate and decline toward the west.

The gospel of the stars then is no invention of ours. It has been indicated in the celestial signs, and the course of the sun and planets among them from remote ages. We rightly attribute the words of our Psalm to the first man. In another, quite as probable after his fall and his reclamation (cxix. 89-91), we read "Forever, O Lord, thy word is settled in heaven, thy faithfulness unto all generations; thou hast established the earth and it abideth. They continue this day according to thine ordinancy; for all are thy servants." So in the epic of Job, that we rightly attribute to Noah immediately after the deluge, since he refers to nothing later than that catastrophe, we are told of the ordinances of the heavens whose dominion is to be set in the earth; and the enquiry is made, "Canst thou bind the sweet influences of the Pleiades, or loose the bands of Orion? Canst thou bring forth Mazzaroth with his seasons? or canst thou guide Arcturus and his sons? Knowest thou the ordinances of the heavens? Canst thou set the dominion thereof in the earth?" These things can God do and not man. Mazzaroth, or Mazzaloth, the presagers, the instructors of men in things to come, have always been put for the twelve signs of the Zodiac. In no author of any respectability have they had any other sense. Piscinus also tells us that Boötes and the Bears are Arcturus and his sons. Between these

men turned into bears by infernal magic, is the tail of the Dragon or the Great Serpent that is uncoiled and springing upon man (Arcturus—Boötes) below, but he is paralyzed by a blow from the foot of Herakles, the son of the whole circle of heaven; that the Greeks make to strangle two serpents while in his cradle—the one being this polar serpent, and the other the infernal Cerebus, the guard of the dead from below. The two bears also, Picinus informs us, are named and put for Cain and Abel; making Arcturus the first man; as is Cepheus, or Kaikaus upon the opposite side of the pole. But Cain and Abel are only representatives of the race. Cain is Ursa Major below the tail of the dragon, thus standing for that large portion of the race that live under the power of an evil conscience; while Abel, as figure of that small company who live above the world though yet in an imperfect state, is put for Ursa Minor above the tail of the dragon.

At this point comes in the structure of the Great Pyramid; and we find the downward passage so directed that 2170 years B. C. the old pole star in the tail of the dragon would have looked directly down its centre to the unfinished pit below, if it were then standing, while the Pleiades in the neck of Taurus were on the meridian; these Pleiades being probably put for the seven ages of man before the opening of the millenium of peace. Thus, could we prove that the Pyramid was built before the deluge, as has been commonly held, we could show a strong presumption that the builders were endowed with either a spirit of prophecy or a correct knowledge of mechanical astronomy, and know that such an aspect of the stars would occur at a certain point that we name 2170 years B. C., or 6x9 years before the birth of Abram by our best tables, an event of great importance to the future development of the race; though at that time Egypt was held by an idolatrous people, whose priests, it is said by Josephus, that Abraham confuted when he taught them astronomy and arithmetic (*i. e.* sacred astronomy and numbers used artificially, or mystically) of which they were before ignorant or misinformed, for idolatry is in its leading idea a perversion of the Sacred Astronomy, which is taken up altogether with the way of Messiah in the world of life and man in the world

of the apostasy; and the oldest known idolatry is an undue knowing of certain imaginary beings held to preside over the celestial signs as ministers of the Supreme Deity.\*

Having thus shown from undoubted authorities that the most advanced men in the apostolic age attached a profound religious significance to the celestial signs, we may now go back and show how the more ancient authorities treated them. In Isaiah (xl., 26) it is said "Lift up your eyes on high, and behold who hath created these things, *that bringeth out their host by number: he calleth them all by names* by the greatness of His might, for that he is strong in power: not one faileth." Here we have at least a rational explanation of the fact that none else but one divinely informed can tell us when and by whom were the celestial signs and their leading stars named: when and by whom were they hosted and arranged in their order, each in its proper place, so that in their combined effect they should indicate the Gospel that we find written out in words in the later Scriptures: for the earliest Scriptures on earth are later in time than the revelation of the celestial signs, the eldest being an account of these as preëxisting; and letters themselves are but secondary forms of the signs upon the sphere.

The idea of the earth itself, as created and controlled in accordance with the indications of the sphere, is also presented in Isaiah li, 16, when it is said: "I have put my words in thy mouth, and I have covered thee in the shadow of my hand, according to the division of the heavens and the founding of the earth, even saying unto Zion, Thou art my people."

We have thus far confined our examination to general terms, but before giving account of ancient usages, we must first note how the heavens may be partitioned into sections. The first division to be noted is that of the plane of the earth's equator, which divides the earth into upper and lower hemispheres, whose poles are ninety degrees distant from the equator on every side. Thus the ecliptic passing through the twelve signs of Zodiac cuts twice at opposite points, and at an angle of twenty-three and one-half degrees. Cutting both the equator and the ecliptic at opposite points is a star circle named the

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\*See Maimonedes upon Idolatry, cited in Cudworth I. page 618. Andover Ed.

Galaxy, and by mistake the Milky Way, which, in passing from the vicinity of the north pole round through the lower hemisphere back to same pole again, cuts four groups of constellations, so that in the Ecliptic and Galaxy systems are sixteen groups of signs. South of the southernmost of these are other signs, as the Cross of the South (supposed to be the Cross of Ixion,) the star Achernar in the star stream named Styx by the Greeks and Italians, supposed to represent Tantalus, lip-deep in water that he cannot drink, and the bright star in what is properly called Charles' Oak, once the eye of the vulture that they say tore the liver of Tityus; besides which are a few others not distinguished upon modern planispheres. This region, near the southern pole, has but few stars at all bright, though it is surpassingly rich in telescopic objects, nebulae, etc. It was held to be forever dark in the system that treated Sion (or the north polar region) as always light; and it was made to represent the punishment of the incorrigibly wicked, and was one of the regions named the outer darkness, the other being external to the circle of the stars.\* In Virgil (Geor. I, 240, 243) the mountains on the north (whatever they may have been) are put for the north pole of the earth, while the south looks down upon the black Styx and the deep down Menos in the almost starless firmament of that quarter.

The upper hemisphere of the heavens, then, is put for the world of life, while the lower is correspondent to the world of death: the region about the north pole is called Paradise or Heaven, while that about the south pole is put for the lowest hell. In Hebrew here are the *hadre teman* or the chambers of the south.

The twelve signs in the Zodiac correspond to the twelve degrees of Messiah in the world of life. These are (1) his eternal generation; (2) his appointment as Lord and Judge from eternity; (Prov. viii, 23); (3) his bearing up all things at the creation; (4) his beginning to destroy the malignant powers, when they appear; (5) his beginning to save them that hide with him, and the universe with them, from falling under the power of corruption; (6) his becoming man for the life and light of the world;

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\*See Lucian upon the Tartarus of Homer.

(7) his rejection and temporary exposure to the incursions of the rebel angels with his redeemed; (8) his offering of himself as an expiation for the sin of the world; (9) his resurrection and ascension among his foes; (10) his setting up of his sodality with the intent to draw into it all nations in due time; (11) his final defeat of the malignant powers that have retired from post to post as he has advanced with his redeemed; (12) his visible exaltation to supreme power in the judgment of angels and men that have sinned.

The four signs of the Galaxy system denote (1) the fall of man from his state of rectitude; (2) his passing through death under guard of his Redeemer; (3) the expiation of man and his deliverance from the incursion of the malignant powers; (4) his restoration to the bliss he has once forfeited by sinning.

Had we been witness to the march from Egypt to the Red Sea, or the review at Sinai, the encampment in the desert, the review at Pisgah, the crossing of the Jordan, or the battles of Joshua and his successors to Solomon, we should have seen for their ensigns certain forms for the twelve signs for twelve of the tribes that were to have landed estate in Palestine; while Levi (the thirteenth by the adoption of the two sons of Joseph in his place), had for his a sign (the altar) out of the Galaxy circle. So far as known from the Scriptures (Gen. xlix., and Deut. xxxiii., Josh. xv., 19), the Hebrew interpreters in the Targums, the Talmud and the great commentators, the order and forms of the standards may be thus described: *First*, Naphtali forms and marches beneath some representation of the sign Virgo that had been in the summer solstice from A. M. 400 till near the Exodus. It was with this sign that all the ancient peoples began to reckon the year until sometime not far from the settlement of the Hebrews in Canaan under Joshua, when all, except the Chinese, began to reckon from the first point in Aries. We know that for certain purposes the Hebrews did this from a passage in Joshua (xix. 34) where Judah is set east (that is above) Naphtali upon Jordan (the descending line), while upon earth Judah was the sixth tribe south of Naphtali; Leo (Judah) then was no longer in the summer solstice, as before the exodus. The ensigns were often (as here) named from



the tribes that bore them in their marches and battles and at their reviews.\* *Secondly*, Asher marches under Libra, but what form of it is uncertain. The same is also true of Naphtali. The most common form of Virgo is a woman holding in one hand a spike of corn or rice, and in another a palm branch, whence the sign is properly named Virgo. Azimech (Alma Hazemach) the Virgin and the Branch, a well-known title of Messiah among the Hebrews. (Isa. iv., 2, xi., 1; Ps. lxxx., 15; Jer. xxiii., 5, xxxiii., 15; Zec. iii., 8, vi, 12). In Egypt and the east we have a mother and child, and in China his toy is a globe and cross, because the world becomes his domain after his humanity has submitted to crucifixion. In India there are three heads of rice, and in Egypt there is Leo Sphinx over a serpent, for the hydra or fleeing serpent is below Virgo. In meditating upon Messiah imaged in the standard of Naphtali (Gen. xlix., 21), Jacob sees a noble stag born with broad antlers already grown. Moses (Deut. xxxiii., 23) seems to contemplate Messiah as a most favored youth entering upon labors and trials, full of courage and bound to achieve everlasting fame. "Possess thou the west (Leo) in the south;" (Aquarius) *i. e.* the west after the south; for glory is after humiliation.†

Then we should see the tribe of Dan by their thousands mov-

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\* A trace of this serpent is still preserved in the name *Sesuth* for the sting of Scorpio; as this noun is plural (originally Sishoth from Seshah) and this signifies pierces, stings or fangs. Two rather bright stars are in the tail of Scorpio that once represented these fangs, as the serpent was raising his head to strike the eagle if the arrow aimed at him in the next sign does not first transfix him. It was this serpent that Hosea had in mind when he said: "Where, oh Death, are thy fangs?" that St. Paul reads, Where is thy sting?—(Hos. xiii., 14; 1 Cor. xv, 55.)

† Charles Latimer has shown, that when this woman (Virgo) was "clothed with the sun with the new moon at her feet," several of the most remarkable events in modern times have had their inception. It would be well to look farther, if astronomers can find time to do so, and ascertain if older events of great importance have not corresponded with these in respect to the position of the sun and moon at their inception. From the terms of the prophecy in the Apocalypse it would seem that Columbus and Luther were not the first to have been found in this relation, and the Apostle in his vision was shown persons and events of a much earlier date; the woman flees twice to the desert, the second time upon wings as if she were to pass over the sea.

ing under the cherubic eagle holding in his talons a serpent.\* The forms of this third sign are numerous, as its forms are complex. An elephant, or camel, as an animal strong to bear burdens, has once formed an emblem of Messiah bearing up all things; and the letter name of this sign is Gimel (for Gamel) a camel. It is here that the labors and conflicts of Messiah begin; and so here appears foes and obstructions; and these hint in what way the malignant powers oppose themselves at every degree of Messiah's progress; for here we are entering the world of the dying, and this—the sign of the autumnal equinox in the old sacred astronomy—is the house of death, as the sun passes through it into the lower hemisphere. Here a lion is to be killed, an eagle to be tamed and made servicable as a vehicle whereon the Mediator, or God, may ride over the heavens and thunder on his foes (Deut.xxxiii,26. Ps.xviii,10: lxviii,4) Sometimes for this eagle there is a Pegasus, whose station now is in Aquarius. Among Egyptian emblems of this sign there is a man with snaky legs breathing fire and strangling a serpent in each hand. Again he is involved in the folds of an immense serpent up to the waist, while from his right hand goes down a thunderbolt upon his foes. He is bound to break through their fortified hold, that his redeemed may find the foe in full retreat downwards. This is the Tyre of Ezekiel's strange prophecy concerning the annointed covering cherub (xxviii, 12-19) and Tyre itself is a town, a fortress, an entrenched camp, &c., and so each of the signs may be called a tower, a camp, a fortress, a palace, a mountain, as well as a forest, a grove, etc., and in the legend of Samson, the spirit begins early to move him in the camp of Dan, he is preparing to become like Messiah in the sign of Dan, a hero warring on his country's foes. The latter form of this sign is a bold and wrinkled old man grasping with both hands by the middle an enormous serpent while he stands upon a scorpion. For this upon old spheres they sometimes

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\*The better forms of the sign Virgo Azimech indicate dominion or power: sceptres, scourges, an arrow, a man with extended arms, a bull's head, etc. Those of Libra are usually a house, a throne, a serpent paralysed by the touch of a rod, an enclosure, etc. The house is the temple of justice where he dwells that weighs the destinies and the rewards of creatures. Libra is held to be the Shaveh, or the king's dale in the Melchisedech legend; as it is the evidence of the Lord of all justice and truth.

substitute a man choking a serpent or two serpents each by the neck. In the east two ostriches are thus strangled. Upon the sphere the serpent with expanded jaws is turning back to sting his strangler ; but that will not save him ; he must die. Hercules strangling Antæus by the loins is a form of this image.\*

After Dan we should see Manasseh moving under a horseman, or centaur ; and this is our fourth sign. In Hebrew he is called Zidon, the huntsman (Gen. xlix, 13) or Ramah (Arabic Ramih) a bowman or shooter, and he aims an arrow upon the scorpion, as once upon the serpent that was raising his head to sting the eagle that held him in his claws. The letter name of this sign is Daleth, a veil (the doorway of a tent) a gateway to an enclosure, etc. This name must have been given in the very first age, for by A. M., 400, it ceased to be the gate of the sun to the lower hemisphere, the equinoxes then passing out of Gemini and Sagittarius into Taurus and Scorpio. By astronomical notices through the precession of the equinoxes we can determine times with some precision. Thus we know that from about 5,600 to 7,740 years since the equinoxes were in Gemini and Sagittarius, while the solstices were in Virgo and Pisces ; and so, back of the Tauric periods, we find the Centaur born in clouds and the Gemini lords of tempests ; both facts indicated that these were stormy or equinoxial signs, and that man was then upon earth to observe them and be endangered by their influence. Still the current allusions are to Orion and the Kids and Scorpio as tempestuous signs, while the Pleiades were watery signs in the spring—in the time of vernal equinoxes ; the current sacred astronomy being that wherein Taurus led the year, and this all the way down at least to the time of the Advent (see Virgil Geor. i, 218) after which all grand, serious writers cease and all is sectarian controversy concerning creeds and philosophies and superstitious observances for more than a thousand years ; and until our own times little notice was taken either of the Gospel in the stars, or of the true interpretation of the books that contain it on earth.

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\*The letter forms of this sign are usually scourges, arrows, a serpent paralyzed by the touch of a rod, a sting, a battle-axe, a camel's head and shoulders and forefoot, etc.

We have now reached the opening of the second cherubic period; \* the first ending with the eagle over the serpent, now a scorpion, and its bright red star, now named Antares, the breaker through: † once Shiloh (Arabic Shuleh) the flinger of darts, or thunderbolts (Deut. xxxiii, 2) Saish, the Treader-down, the Lion, or Leshem, one that licks or rasps his foot with his tongue, as does a lion. The three other cherubic sections close with Aquarius, Taurus and Leo; and each of these has its particular bright star, these four being about ninety degrees apart, and named the Four Kings in the East. It is to be noticed that as the way of Messiah begins with Virgo, that has also its bright star, Spica or Azimech, and goes round to Leo, so his third, sixth, ninth and twelfth degrees are marked each with a bright star. Those in Scorpio, Taurus and Leo are red; that in Aquarius being pure white, like Spica in Virgo. The ancients held that Messiah takes all the forms of the Cherubim, as his adversaries before him have taken various forms, that he subdues one by one, and sometimes at least takes their forms, as it was customary among the ancients for the conqueror to array himself in the armour of the foe he had vanquished, or to take his shape and name, or some name suitable for the occasion. Hence Messiah was represented, and in certain places honored, under the figure of a serpent, a lion, a bull, a goat, a ram, etc. One of his figures, therefore, in the wilderness, was the brazen serpent upon a cross, as a sign that through the cross the serpent was to be killed; and the same was meant by a serpent paralyzed upon the wand of Esculapins, or the two upon the dove-winged cross of Mercury-Hermes; and among letters, serpent pierced with arrows or spears, or paralyzed by the touch of rods, are common in both east and west.

But when the tribe of Zebulon appears we should see a ship setting sail over sea. Here the Proteus of the rebellion has

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\* A cherub is the bearer of a mighty one (Carrab); and so God rides upon a cherub (Ps. xviii, 10), and the cherubim are bearers of the chariot whereupon Jehovah is represented as riding in the visions of Ezekiel. The letter forms of this fourth sign are a curtain, or veil, a flag, a gate-frame, a bar upon which a curtain is drawn up at the corners, a gate, etc.

† All astronomic names were once Hebrew, and most are still Hebrew, though the most are corrupted by Greek or Italian, and later by Arabic usage.

taken the form of waters, after appearing as a lion, or eagle and a centaur to stop the way altogether ; but, as the lion has been killed, and the eagle and the centaur have been tamed and made allies to the advancing Mediator—God—so here the divine Proteus\* turns himself into a ship (some say into a leviathan or huge fish), as on our spheres we have fish with the head of a goat and will bear his companions safely over the waters to the shore beyond. This sign is in the south when Judah is east from Naphtali and upon Jordan : (See under Naphtali supra) *i. e.*, it is then in the winter solstice, as was Aquarius before the Exodus. Both Jacob and Moses (Gen. xlix, 13 : Duet. xxxiii, 18) perceive in the ensign of Zebulon a ship setting sail, having Zidon (Sagittarius) astern. Jacob upon his deathbed gives ensigns to his sons, and speaks as an Asiatic ; Moses sees them pass in his last review, and speaks as an Egyptian ; both meditating upon the Messiah as imaged in those ensigns, and what shall be the outcome of his conflict with the malignant powers, not under the theocracy (if Jacob speaks true) but in “The aftertime of days :” *i. e.* in the times of the incarnation, † (Gen. xlix., 1) and at the end of the world.

The letter form of this sign is often that of a city, or garden. Among the Egyptians one of its forms is that of a city walled all round and the gates closed, while a serpent watches above with bared fangs ready to strike. Another is a city, or garden with the gate thrown open, and perhaps removed altogether, and the serpent is gone. In the Hebrew and Syriac two walls are wanting, but that at the left is supplied by a serpent either coiled or slightly curved, ‡ as if to show that heaven is opened and can no more be shut. That serpent, however, is the same that was represented in the brazen serpent of Moses. One of the exploits of Samson is to carry away the gates of Gaza in the presence of his foes ; as the Grecian Herakles carries away those of Gades ; both these names being the same in a form slightly different,

\**Poreth* ( ) one that cannot be confined, that can break away from all bonds.

†The *aharith yamine* always has this sense among the Hebrews. Though not always among the infidel Germans.

‡Our E forms—some of them very ancient—are from a landscape with two sharp summits behind an elevated wall. This is found now only in old Italian. The secondary forms are in both East and West alike.

and each signifies a strong place. Samson is put as a sign of Messiah in his strength; and Herakles is a shadow of Messiah among the heathen as Lord of the universe (*har-kol*) all religions being but one religion variously corrupted, or more or less perfectly reformed; and all sacred names are from a common source in the original sacred tongue; all languages known beside the Hebrew being so many dialects of it more or less divergent from it in form or sense, or in both form and the sense of particular words. In these examples we may understand why of the so-called gates of the sun one was in Capricornus and the other was in Cancer. In both the way is stopped by a field of waters; and this (certainly in Capricornus) was often represented by a city or garden closed.

Samson piles the gates upon the hill before Hebron (conjunctions), the lophos where Orion stands before the intersection of the ecliptic and the equator in Taurus, and waits for the expected coming up of Messiah from below. In other words, he opens the way to Paradise, drives from his place the foe that would hinder the dead from rising at the appointed time. (See under Ephraim farther on).

When the tribe of Reuben appears, their ensign is a man pouring water from an urn, or an urn marked with a cross. This latter is found upon a Hindoo Zodiac (Oedipus Judiacus Plate, ix) and among the stars, the cup of Aquarius—Aristaens (*har shatha*) the lord of the cup is really a cross with its principal stars in the form of a drinking vessel  $\left( \begin{smallmatrix} * \\ * \\ * \end{smallmatrix} \right)$ . The Hebrew name *Deli* (an urn or bucket) is still found upon our spheres, and to this or some figure spouting streams on every side (John vii., 38) Balaam refers when he says (Numbers xxiv., 7): "He shall pour water from his (*deli*) buckets, and his seed shall be in many waters."

Here we have the man of the Cherubim, and in his foot (upon one sphere in the mouth of a fish) is the second of the four kings, the bright white star named Tomalhan; that is, probably, *yapha-ma lahatha*, the beautiful (Ps. xlv., 2) shall drink to fulness (Ps. lxxiii., 10); he shall be overwhelmed with sorrow—with floods of water (Ps. lxix., 1); the floods of Belial

(Ps. xviii., 4.) Some, as the Egyptians, say that he takes into his urn the waters of Eridanus that comes rushing down from the tophos where Arion stands (see under Ephraim farther on) and then pours them out changed to water of life. Others, as the Hebrews (Ps. ci., 7), say that he swallows down those floods, and then pours them out from various spouts on all sides (John vii., 38). The Persians held the same views, and their Rustam (*rosh-tam*, head over all) drinks up a river on his way to find and liberate King Kakons and his arm from the power of the White Daemon.

Near Aquarius are two horses cast helplessly upon their backs. One has wings; the Pegasus of the west; of the other only his head is visible. Both among the Greeks are the flesh eating horses of Diomedes, put for the bulls of Angeas (the glorious one) in another place named Orion, the Golden-clad. To these Messiah is supposed to refer in Ps. xxvii., 2, when he says that his foes stumbled and fell when they rushed upon him to eat up his flesh. Here appears fishes, in the east emblems of hatred. One is below the feet of Aquarius, and another is above his head. On one side is the fish-goat put for a ship in Capricornus (Zebulon), and a little beyond are the Zodiacal fishes and a horrible cetus or shark. Messiah is born in the midst of his foes; and so among the Gnostic laws there is a Hermanubis (an Egyptian form of him) surrounded by serpents, scorpions, crows or ravens, etc. Among the latter form of this sign was often a house, a tent, a tent pin, etc., as the humanity is the eternal dwelling of the Deity for purposes of manifestation to the senses no less than to the reason of intellectual beings.

Both Jacob and Moses (Deut. xxxiii., 6; Gen. xlix., 3, 4) in the ensign of Reuben perceive, or remind them of Messiah in his conflicts with the malignant powers; and Moses says of him: "Let Reuben live and not die; and let not his men be few." Jacob sees Messiah flung in a wrestle with the archangel, who for the moment has him under and is holding him down; and he says: "Reuben my first born art thou . . . unstable as water thou shalt not excel, because thou wentest up to thy father's bed." . . . In the mystic language of the later Jews

there are two Messiahs, the son of David (Matt. xxii., 42), who is a mighty conqueror, and the son of Joseph, who is sold to the Gentiles as a slave and raised from prison to supreme dominion (John i., 45), so there are in the elder terminology two Reubens; two first born sons: the archangel, the eldest and most glorious of created spirits, and Messiah—Immanuel, whose “goings forth” are from everlasting; the first being a leader with delegated power; the last in his own power as God destined to become man for the manifestation of God among all ranks of created spirits. Reuben also may signify, Obey the Son, be subject to him that has appointed either for a time or for ever. The archangel, appointed in his native dignity as the guardian of man in Paradise (Ez. xxviii., 14; Luke iv., 6), fails to recognize in his race, as their Paragon, a God-man, whose right to rule is unquestioned, and so rebels against the command “Let them have dominion” (Gen. i., 26), or “Let all the angels of God worship Him” (Heb. i., 6), and exerts himself to the utmost to prevent his coming and taking upon him the rule of all things. It is to this unreasoning, rash presumptuous, who has virtually attempted to assert divine prerogatives as his own, and so is said to have invaded his father's bed (Gen. xxxv., 22: xlix., 4; 1 Chron. v., 1), that the words of Jacob are directed; and he is told that his emblem is water, while that of his opponent is a rock, over which cataracts pour, or waves dash, only to be turned into foam and spray without moving it at all. His advantage is but temporary and must soon pass away forever.

ASAHEL ABBOTT.

[TO BE CONTINUED.]



## THE DOCTRINE OF CHANCE APPLIED TO 888.

The Greek word for Jesus is made up of six letters, their numerical values being respectively 10, 8, 200, 70, 400 and 200, making in all 888. The Hebrew letters being numerals, it is not surprising to meet with this cumulative number in the Old Testament; but when we find it on the Messianic prophecies and types, and on passages harmonizing with, and illustrating the New Testament, we are led to believe that the Holy Ghost has cunningly inwoven the Hebrew text with the mystic number of Him who has fulfilled those prophecies and types.

God alone could have effected this coincidence, for the name, Jesus, was not known to men whilst the Old Testament was being written.

It is a translation into the Greek language of the Hebrew name, Joshua; and before being translated this name underwent changes; the original *Jehoshua* being contracted, in process of time, to *Jeshua*, then the last letter was dropped, and finally the Greek termination was added. Now all these variations, developed in the course of centuries, led to the name's reaching that form in which the letters count up 888. The leaving out, or the addition of a single letter would have been fatal to the combination. The name of the Messiah would not have been stamped on the things written of Him, and there would be no significance in the appearance of 888 on the text of the Old Testament.

It is proposed in this paper to apply to these appearances the test of the mathematical doctrine of chance, a doctrine so well ascertained, and so practical in its bearings, that it has been made the basis of one of the largest and safest branches of modern commerce—the system of insurance.

This doctrine as set forth by Mahan is as follows: "If we have, for example, 153 numbers before us, all taken as they happen to occur, there is just *one chance*, and no more, that one

of these numbers shall be 153 or a multiple of it. If it should turn out, therefore, that there are two such multiples, or three, or four, there is a proportionate probability that something more than chance has operated in the selection of the series, that there has been some intention to bring about the given result.

We will not look for a multiple of 888, but, what is a severer test, for the number itself. I take 153 references which will be found on pages 115, 116 and 118 under the heads '*Of the Incarnation and Nativity of Christ;*' '*Of the Passion of the Lord and its bitterness;*' and, '*Of the Ascension of the Lord;*' in '*The Moral Concordances of S. Antony of Padua.*'"

These references are confined each to one verse. But Dr. Neale in his introduction to the work says, "Its author had, of course, merely referred to the chapter without the verse." Dr. Neale may not have selected the verse or all the verses intended by the author. Accordingly, when I have found an 888 in the verse next or near to the one cited, connected by the sense with it, I have noted it. And this is the latitude which Mahan allows himself, namely: "To select *passages*, most of them very brief, which, from their meaning seemed likely to contain it (153) as a factor."

The total number of the references to the Old Testament contained under the three heads above mentioned happen to be exactly 153. According to the doctrine of chance, the number 888 might appear once, but not twice in these 153 passages. It appears 47 times.

Another book, '*Prophecies and Types Relative to Christ,*' by Rev. Benjamin Dorr, D.D., has 128 references, and on these the number 888 appears 15 times.

Neither of these books give a full, satisfactory test for this number. The latter is intended for the use of Sunday schools, and, of course, is meagre. The other is mediaeval. But they are the only ones I have been able to consult.

In either case the doctrine of chance is included. The chance that there should be forty-seven 888's in 153 passages is the fraction  $\frac{1}{188}$  multiplied into itself forty-seven times, a fraction which it would be idle to compute, but which, on a rough esti-

mate, might be represented by a denomination of something over one hundred ciphers.

Following are some of the references, the verse in which 888 occurs, if it is other than the reference, being put in brackets :

I. Gen. xxiv., 2. [57. "And they said, We will call the damsel, *and enquire at her mouth.*" 888.] [51. "*Let her be thy master's son's wife.*" 888.] Num. xvii., 2, 24, 17. [9. "He couched, *he lay down as a lion, and as a great lion : who shall stir him up ?*" 888.] Judges xiii., 2. [5. "*And he shall prevail to save.*" 888.] Is. ix., 6. "*His name Wonderful, Counsellor, Mighty God, Father.*" 888. liii., 8. [7. "*As lamb to slaughter he was led, and as sheep before her shearers.*" 888.] lii., 13. [10. "*Salvation of our God.*" 888.] lx., 1. [2. "For, behold, darkness shall cover the earth, and *gross darkness the people : and on thee shall arise Jehovah* (888) and his glory shall be seen upon thee."] Hosea xi., 1. [3. "Also I set Ephraim on his feet, taking them by their arms ; *and they knew not that I healed them.*" 888.]

II. Gen. xxxvii., 18, 23. [7. "For, behold, we were binding sheaves in the field, and, *lo, my sheaf arose, and also stood upright.*" 888.] 1 Sam. xxi., 31 (15, 16.) 1 Kings, xxi., 9. [10. "Set two men, sons of Belial, before him, to bear witness against him, saying, Thou didst blaspheme God *and king, and carry him out and stone him that he may die.*" 888.] Ps. xxii., 17. 18 (32.) xxxv., 16, 21 (10.) cxlii., 4. "*I looked on my right hand and beheld, but (there was) no man that would know me : refuge failed* (888) me." Jonah i., 17. "*Now the Lord had prepared a great fish to swallow up Jonah. And Jonah was* (888) in the belly of the fish three days and three nights." Hab. iii., 4 (8.) Zeck. xi., 12. "And I said unto them, *If good in your eyes, give my price ; and if not, forbear.*" (888.)

III. Ex. xiv., 15 (17, 22, 29.) Ps. xviii., 10 (8) : xix., 6. [1. "*The heavens declare the glory of God.*" (888.) 14. "*Let them not have dominion over me : then shall I be upright.*" 888.]

Even these sixteen quotations prove this number not to be a chance appearance, but a select expression identifying Him whose name counts 888.

J. A. UPJOHN.

## EVIDENCES OF IDENTIFICATION OF THE AMERICAN AND BRITISH PEOPLES WITH LOST ISRAEL. A MARVELOUS DISCOVERY.

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THE AMERICANS IDENTIFIED WITH LOST MANASSEH—THE BRITISH WITH THE LOST TEN TRIBES—INCONTESTABLE, CONCLUSIVE AND UNMISTAKABLE EVIDENCES—THE DEATH BLOW TO INFIDELITY.

*Evidence No. 6.—Israel not lost in Christ's time.* It is important to see the point, that the Tribes of Israel destined to be lost, were not actually lost in the days of Christ on earth. It would have served no purpose had they been so and would materially have hindered the mission work to them. They were only lost then, in the sense of being outcast from their land, in positive exile, preparatory to God causing them to become absolutely lost "in the Isles of the West." They could only become really lost in these isles, these forming the only "place" where it could have been said to them "Ye are not my people," and the very identical place, where it has nationally to be said to them, "Ye are the sons of the living God." Hos. i., 10. As a proof that this was so, Christ sent His apostles after lost Israel, and they went after them, and easily found them. Paul and other apostles in carrying out their mission, found Israel in various localities in the full use of synagogues, serving under the Mosaic law. This proves that they must have known themselves, because only Israel was under this law. A Gentile nation has never served under Moses, so the people found under Moses must have known themselves to be Israel, and the apostles at once recognized them to be the lost Israel they were sent after. They had even—though for a long time, about 700 years cast out of their land—kept up their Mosaical institutions in the matter of genealogy and the rite of circumcision, on which questions Paul found them high in dispute, and each would have rendered it impossible

they could be lost to their origin. Just prior to redemption we read of Anna of the tribe of Asser waiting for redemption. At Pentecost devout men, the representatives of outcast Israel, were gathered together from all the regions round about that we know Israel to have been scattered in. The Jews did not share in the outpouring, but mocked, and charged Israel with being drunk, making Peter angry, who said, "Ye men of Judah (Jews) these (Israelites) are not drunken as ye (Jews) suppose." Acts ii, 14-15, and when breaking up at Pentecost, these Israelites were bid to carry the news of redemption and the Gospel to their children, and those not present, but "afar off" (v. 39.), and above all to let "the house of Israel know assuredly, that God had made that same Jesus, whom they (the Jews) had crucified, both Lord and Christ," v. 36. Then after this Josephus, oftentimes styled the truthful historian, testifies to the whereabouts of the ten tribes being known, saying that the "Ten tribes are beyond the Euphrates till now, and are an immense multitude, not to be estimated by numbers," so that this is abundant evidence that Israel was not really a lost people in Christ's time, nor can it literally be said that they were actually lost to themselves completely even after some of them had settled in the British Isles, and we mention this because it supplies another very important historical evidence that the Americans and the British are Israel.

King Alfred was asked by his subjects to give them some new laws. He replied, "You have had the Ten Commandments given you, what can you want more? A code of laws was, however, planned and called the "Dooms of King Alfred," and can be seen in the record office, Rolls buildings, Fetter Lane, London, England. The thirty-third ran thus: "You are to be kind to strangers and those that come from afar, for, remember, you were once sojourners in the land of the Egyptians." This meant, if it meant anything, that the king knew that the British people were of Hebrew origin.

Again, when Richard II. was heir apparent to the throne, and made his first appearance in the House of Lords at twelve years of age, in the year 1377, his chancellor, the Bishop of St. David's, addressed the British Parliament as follows:

"Thus you may embrace your noble King, Edward III. with the arms of your perfect love, since he has sent you him, whom you longed for; and, after your king, embrace with love as perfect my lord the Prince, who is here present, whom you so ardently desired to see; for there is through him that peace over Israel which the Scriptures name, Israel being the heritage of God, and that heritage being also England. For in good truth I believe that God would never have honored this country by victories, such as has given glory to *Israel*, had he not intended it for his heritage also."—Rolls of Parliament, volume ii., page 361.

*Evidence No. 7.—The Apostles where the Saxons were.* That the Apostles at the command of Christ, when sent expressly after "the lost sheep of Israel," went into the very regions where our Saxon forefathers were then located is self evident.

They went into certain regions after lost Israel and there in the very same regions they found the British ancestors, whom we now know were the identical people of Israel. This cannot fail to be a point of exceeding great interest. Israel had at that time fully broken the yoke of the Assyrian from off their necks. They are proved by historical evidence to have taken a westerly, and not an easterly direction. They are also proved to have been recognized by the name of Saxons and in the time of the Apostles were located in the region of Cappadocia, Galatia, Macedonia, Thessalonica and the regions round about. These Saxons are now proved to be the Israelites, and we know they were our forefathers. They were found still under the Mosaic law, and were distinctly told by these Apostles, that Christ had redeemed them from this law. They were told that they were once under the law of Moses, but then by redemption had been delivered from it; once under it, but then were dead to it, that this Mosaic law had been to these Saxons only a schoolmaster to bring them to Christ, therefore by receiving this knowledge they immediately accepted Christ and became a Christian people. This was the very news they had been waiting for, why they had kept waiting about these districts. With the knowledge given to them, there was no need to wait about longer. From

that time they could press on their course in fulfillment of further Scriptures, they could depart and seek their final home of exile in the isles. They became a great people, quickly started in motion, with their faces to the west, they had embraced Christianity, and this clearly and satisfactorily supplies the reason why it was, as is well known, that from this time there were great hordes, or continents of people, who had become Christians about these parts, but who had, in a course of time most mysteriously disappeared. This has been ascribed to the decay of Christian truth; it was nothing of the kind. Those who had received Christ were these masses of Israelites, who had now become wanderers, a host of tribes in transit, having answered to the very express mission that Christ was sent unto, "I am not sent BUT UNTO the lost sheep of the House of Israel." Here they were having made a full acquaintance with the work of their blessed Redeemer. Thus this glorious historical evidence is in full favor of and not in deterioration of Christianity, and supplies an answer to a void felt for many ages.

*Evidence No. 8.—God's plan of losing the tribes.* God's method in causing the tribes to become lost to the knowledge of mankind appears to be very simple and natural. They had to comply with several expressed conditions. They had to be called by another name (Isa. lxxv., 15) to be spoken to in another tongue (Isa. xxviii., 11) *i. e.*, to adopt a new language. This would obscure the knowledge of their origin, which design would be materially assisted by being taken away from Moses; thus, with a new name, a new language and a new religion, it would seem to be easy to shroud their nationality in darkness. In these cases the prophecies of Moses could readily be complied with. God declared He would "hedge up their way with thorns;" surely this was the way to do it; that He would "make a wall," or a very screen of obscurity; and this was effected; "that she should not find her paths" (Hos. ii., 6) by which her marks of identity would be destroyed; that they "should follow after their lovers;" doubtless their beloved brethren of the tribe of Dan; but they "should not overtake them." Dan would have been then in Ireland, but these tribes were not to go there, but to confine themselves to Great Brit-

ain; therefore, though following, would not overtake. Though they had received a knowledge of Christ and His work, even this, for a time, was to be forgotten. She was to be visited with the days of Baalim, v. 13, *i. e.*, she was again to fall into the darkness of idolatry, but only the same old system, Baalism, the form of idolatry Israel always turned to when they forsook God in Palestine. There are ample proofs that Dan turned to Baal when in Ireland. The round towers of Ireland were only furnace shafts for the fires of Baal, and Baal Hills, upon which Baal fires were kindled, abound now in Ireland, Scotland and England. Thus Israel was to be stripped naked upon her entrance in the isles, as in the days of the wilderness (v. 3,) before she entered Palestine. She was to enter the isles in this degraded, woe-begone estate. The historical evidence that she was actually in this state, is supplied by the fact of these very Israelite-Saxons making their first appearance in Great Britain under the abortion of Druidism, this only being a refined species of Baalism. It was the creation of a Gentile genius, clumsily constructed, savage to cruelty in its details, so that when the superior mind of Israel was required to kiss idolatry in order to pass them into their required "blindness" (Rom. xi., 25) they had to reconstruct Baalism, and, by learning and culture, redress its points so as to produce significance and meaning to its parts, which came out in the guise of Druidism, idolatrous after all, and which has caused our people in modern ages to stigmatize it as a mixture of culture and barbarism, requiring the blood of the slain to be drank in the skulls of the dead, and other practices utterly opposed to the dictates of Christianity. These marked the entrance of the tribes into Britain. What scheme could be better fitted to bring to pass God's design? Nor was this all. We may be quite sure there would not be a flaw in the Almighty's plan of operation. Would the tribes be passed into their isles in possession of the rite of circumcision? I answer, most certainly not. Had this been preserved, it would have been next to impossible to secure them as a lost people upon the earth. This very mark would have stamped them as a well-recognized kindred; in itself it would have frustrated the object in view. To suppose or suggest this



would be equivalent to charging God with a folly; it would be to reflect on His wisdom, for how could a people, destined to become an enormous multitude, and indelibly marked by circumcision, ever have become lost? But there was no necessity for this mark; it belonged expressly to the Mosaic economy, and from this they had been taken away. They were now entirely redeemed from Moses, had nothing to do with him, so would have had no business with this mark (John vii., 22) and this is an all-sufficient answer to the objection often raised, that we could not be identical with the Israelites, because we have not the mark of circumcision in our midst. Gal. v., 6.

Next comes the important question: Would God have sent the whole body of the tribes into these islands at one and the same time? And again I answer: most certainly not. In all, eleven distinct tribes had to be imported; combined they had to come out a multitudinous host, had to swamp by numbers any Gentile nation upon the earth to become the most prolific race in the world. One tribe only, Manasseh's, was indisputably identified, as the Americans had to become in fruitfulness of issue nearly as prolific as the whole ten tribes put together (Deut. xxxiii., 17), so that it would most surely have followed that, if these eleven tribes had arrived at the same time, the finger of history would have been bound to have recorded the fact upon its pages, and when these phases of their prophesied acts should be brought forth, one by one, with the mind of the whole world asking after their whereabouts, they would have placed the prophecies and the productions side by side, found them tallying and connected, and again would the project of the Almighty have been frustrated. By this we know this plan was not followed by God. He was wiser. The mystery of blindness was enacted by taking advantage of the tribal rules; each tribe was kept separated; they bounded upon each others borders, but they did not mix; they were forbidden to inter-marry, and so religiously did they observe this institution that in Assyria, in Medina, and in Western Asia they preserved these tribal distinctions and their separating boundaries. This involved upon the Apostles the visiting of various districts. When sent after lost Israel, each tribeship had a different loca-

tion. In this sense they became "the dispersed among the Gentiles" (John 7, 35), so that when the time arrived for the tribes to drift into the isles, they were drifted one by one; long lapses of time occurred between each drifting; these have been recognized as "the waves of migration;" centuries filled up the gaps of time. It took 449 years to ensure the first arrivals—plenty of time, by the aid of new generations, for the people to beget a dim insight of their ancestry. Scripture had to be complied with, and they had to be called by other names, adopting *aliases*. Paul had well prepared their way; he objected to their retaining their genealogies; laughed at this, styling them old women's fables, so genealogy became disused. They ceased to have communication with each other, were without a postoffice system and had never seen telegraph poles. What better design could have been adopted to have ensured their lost estate? Why the plan was matchless, it was consummate and sublime, and alone could emanate from the Divine. It answered splendidly. Dan was already in Ireland, and Simeon accompanied him, crossing into Scotland. There was also with them the Cadites, an Israelitish family. Then came after long intervals the Albanians whom, probably, we may be able to identify with the *alias* of Manasseh; then Picts, then Frisians, Danes, Jutes, Saxons, Angles; and lastly, but most surely, the Normans, who are already acknowledged to be identified with the Tribe of Benjamin, the identical tribe that the Apostle Paul belonged to (Rom. xi, 1.) Here we have eleven different names, and we do not want any more, only having to account for eleven missing tribes. We have done our duty, these are the tribes. The Bible is now opened up, and the mystery cleared, that surely now we can afford to laugh, and this is the amusing matter. Because we came in separately, our fathers jumped to the conclusion that we were all Gentiles. They decided we were the rag-tail and bob-tail of some disgraced Gentilites who in different parts had received a thrashing, had been running away and by mere chance happened to find an asylum in the British isles. Then they consider it not all a strange thing, that with such tame beginnings, we should have shaken hands all round, thrown in a common lot, combined, and then again by mere

coincidence have come out the strongest and most highly favored nations of earth, whereas, Israel and Manasseh alone upon the earth, were to occupy these exalted stations. Poor simplicity! John Bull and Uncle Sam gulled from the first and palming the gull upon their children in their board and public schools, their colleges and universities to this day, I have to pay 1s 4d in the £ as a school board tax, and allow them to teach this abominably false and unreasonable version, as the history of the nation, which is the most essential point of education. The most astounding thing of the whole matter is that we are Bible reading people, and, as students, ought to have known the tribes had to enter these islands, had to have a prior acceptance of Christianity, had to turn again to idolatry, had to re-unite with each other, had to come out a combined nation (Jer. xxxi., 10), had to suffer under the separation of Manasseh. That these people had to become the two most powerful nations of the world, *i. e.*, the exact counterpart of the history of the British and the Americans.

In conclusion, it is well to add to this class of evidence by presenting the "door of hope." Israel had only to enter these islands an idolatrous people to secure a purpose, but were not to remain in idolatry, because God promised once more to "allure her" in this wilderness "and to speak comfortably unto her," that they should call the Lord Ishi, and not Baali, whose name He would take out of her mouth. Was it so that she could again embrace Christ, be an eminently Christian people, and espouse the great missionary cause for Christianity, a part we have admirably filled as well as all others?

*Evidence No. 9.—Israel in exile in Islands.* Of course in the case of anything lost, it becomes of vital consequence to discover the place for finding, especially in the matter of the lost tribes. No one could have any regard for the Bible without being interested in the lost tribe question, neither could they understand the Bible without understanding this question. Search after the lost tribes has been made in all ages, the learned of most nations have taken their part in the search. They have been supposed to have been found in every quarter of the earth and in most parts; thus much time, labor and ex-

pense have been entailed, might almost say wasted, because the Bible is very explicit as to the place where the tribes shall be found, and if people had only searched their Bible they might have found Israel long ago.

They must be re-discovered in islands after the division of Israel from Judah and the exile of Israel from Palestine. Whenever God specially addresses Himself to Israel, He refers to the isles, speaks to them as in the islands. He would have no purpose in doing so, unless they were there. "Keep silence before me, O island" Isai. xli., 4. "Sing unto the Lord a new song, and his praise from the end of the earth—the isles and the inhabitants thereof" Isai. xlii., 10. "Let Israel give glory unto the Lord, and declare His praise in the islands" Isai. xlii., 12. "Listen O isles unto me" Isai. xlix., 1. "The isles shall wait for His law" Isai. xlii., 4. "Declare in the isles afar off, and say, He that scattered Israel will gather him" Jer. xxxi., 10. "To the islands will he repay recompense" Isai. lix., 18. All these Scriptures have direct reference to Israel, and in no sense to Judah they are only applied to Israel, and beyond doubt refer to Israel as an island people. It is quite true that there are many islands about the earth, some of them very near to the seat of prophecy, Palestine; such for instance as the Greek islands and these might be suggested as the islands referred to. But these would not answer the Scriptures, from the very fact of being "near to," instead of "afar off." That Israel would be in possession of these isles at this present time is most clear from the Scripture fact, that should the return of Israel take place next month, the very proclamation of the return would first of all have to be proclaimed in the isles. A free translation, and what is really meant in Jer. xxxi., 10, might well be rendered thus: Proclaim a royal proclamation in the isles (British) afar off, and proclaim He that scattered Israel will gather him (in the isles, the place of proclamation). The great beauty of these Scriptures prophetically, is that they declare the mind of God to Israel in the latter days. These Scriptures were *not* given when Israel and Judah were one, before their division had taken place, but were issued B. C. 606, or 115 years after Israel had positively been

in exile, at a time when Israel was already cast out, but when Judah was not, indeed 18 years before the Babylonish captivity of Judah had taken place. The declaration is embodied in prophecy, therefore nothing could cancel it. Prophecy is the "more sure word" (II. Peter i., 19) therefore may be said to express the latest determination or will of the Almighty. Christ declares that it must take effect, saying "Think not that I am come to destroy the law (Ten commandments) or the prophets: (the voice of prophecy). I am not come to destroy, but to fulfil. For verily I say unto you, Till heaven and earth pass, one jot or one tittle shall in no wise pass from the law till all be fulfilled." St. Matt. v., 17. This very assurance of Christ's, ensures the proclamation being made in the islands, ensures Israel being there now, and ensures Israel's return from a "north country" (Jer. iii. 18), "when a great company shall return thither." Jer. xxxi., 8. If this were not so, Christ would have made a false statement, God would have broken his word, and the Bible would be rendered untrustworthy. As this is impossible, it follows, these things must be so, and Israel must now have exile in an island home.

*Evidence No. 10.—Israel's islands must be northwest.* It is not enough to find out that Israel's exile home would be in islands, but the very geography of these islands is given in Scripture. This fact is very plainly ascertained. They must be isles afar off, and northwest from Palestine. In Hebrew there is no method of expressing the intermediate points of the compass. It can express the cardinal points, north, south, east, west; therefore, when the intermediate points are required, they are expressed in this way: By the sides of the north, implying whether N. E. or N. W. (Isa. xiv., 13); by the sides of the east and west (Ezek. xxxii., 23); side of the north (Lev. i. 11) etc., etc.; or the idea can be expressed by the mention of two cardinal points separately, the method generally employed to describe the position of Israel's isles. Thus, "Go and proclaim these words towards the north, and say, Return, thou backsliding Israel."—Jer. iii., 12. Of course the House of Israel and not the House of Judah is here referred to, because in the very preceding verse the distinction of Israel

from Judah is given thus : "The backsliding Israel hath justified herself more than treacherous Judah." (See also v. 8.) This was said ninety-two years after Israel's captivity, or forty-one years before Judah's captivity. "They shall come together out of the land of the north to the land (Palestine) that I have given for an inheritance unto your fathers."—Jer. iii., 18. "I will gather thee in the west."—Isa. xliii., 5. "To the island will He repay recompense, so shall they fear the name of the Lord from the west."—Isa. lix., 19. The new song they are yet to sing is to be, "The Lord liveth which brought up, and which led the seed of the House of Israel out of the north country." Jer. xxiii., 8. "They shall lift up their voice, they shall sing for the majesty of the Lord, they shall cry aloud from the west. Wherefore (Israel) glorify ye the Lord by the Urim and Thummin, the name of the Lord God of Israel in the isles of the west."—Isa. xxiv., 14, 15. It is right to observe these last vary slightly from our current version, but I am authorized so to render them. The word "sea," the identical Hebrew word, is thirty times elsewhere correctly translated "west," and eminent Hebraists have instructed me that the term "west" should be used instead of, in the two instances, "sea"; also, that no reference is made in the original to the "fires of Baal," but a pure reference is made to the Urim and Thummin, and as these are known now to be in Ireland, point is given to these Scriptures, which, so translated, renders them both intelligible and highly significant. Further comment is unnecessary. The *evidence* is contained in the British being identical with Israel, dwelling in islands northwest, and afar off from Palestine; and in the Americans identical with Manasseh, having for a long time had abode in, and springing from them. What more is wanted? This evidence is conclusive in itself.

Artellus says: "The ten tribes went west and north to Ars-ereth, where, on entering, they were called <sup>1</sup>Gan-thei, or, the people of God."

Chambers, in his 'Encyclopædia,' says: A Saxon league, or confederation, makes its appearance in the northwest of Germany."

Esdras tells us that the ten tribes entered into the Euphrates

by the narrow passages of the river, and went westwards: "For, those are the ten tribes which were carried away prisoners out of their own land in the time of Osea, the king whom Salmanasar, the king of Assyria, led away captive, and he carried them over the waters, and so came they into another land. But they took this counsel among themselves, that they would leave the multitude of the heathen, and go forth into a further country (westwards), where never mankind dwelt, that they might keep there their statues, which they never kept in their own land, and they entered into Euphrates by the narrow passages of the river, for the Most High then showed signs for them, and held still the flood till they were passed over, for through that country there was a great way to go, namely, of a year and a half; and the same region is called Arsareth."—2 Esdras xiii., 40, 45.

*Evidence No. 11.—Renewing strength in the Isles.* Of course it must be readily seen and admitted, for a great people like Israel, to go through the fatigues of transit, in being transferred from one part of the earth to another, in distance reckoned by the Esdras "as taking a year and a half" of time, if done, without stoppages, (2 Esdras, xiii., 10,) would entail a considerable diminishing of strength, the more so, as they had been in exile for so long a time beforehand and the stock comprising not only men, but women and children. Paul foresaw the enormous difficulties they would have to contend against in forcing their way through foreign territories, and gave the advice that it was better for them not to marry, (1. Cor. vii., 26,) of course he was not suggesting a standing rule, because the people had to become as the sand of the sea for multitude, and such a will would have run counter to the will of God, but it was good for those times of "distress." That there was a diminishing of strength is clearly recognized by Scripture. God says "He giveth power to the faint, and to them that have no might He increaseth strength. Even the youths shall be faint and be weary, and the young men shall utterly fall. But they that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles," (Isai, xl., 29, 31.) Probably a reference to the American eagle. In

the next chapter, Israel is referred to as having arrived in the isles "Keep silence before me O islands, and let the people renew their strength" (Isai, xli., 1.) That Israel is intended to be the people to do this is clear, for, "thou, Israel, art my servant Jacob whom I have chosen, the seed of Abraham my friend. . . . Thou art my servant. I have chosen thee, and not cast thee away. Fear thou not, for I am with thee; be not dismayed, for I am thy God; I will strengthen thee; yea, I will help thee; yea, I will uphold thee with the Right Hand of My Righteousness." (v. 8-10.) These are promises made by God after their exile, to apply when they had reached the isles whither they were directed to. If God had not made such an arrangement He would have broken His covenant with Abram, with whom he covenanted to make his seed as "the dust of the earth."—Gen. xiii., 16. "As the stars for multitude."—Gen. xv., 5. "As the sand."—Gen. xxii., 17. And surely the evidence is sufficient. From that day to this we have been continually increasing, to the extent that now the British are 100,000,000 strong, and the Americans 50,000,000, with the astounding fact before us that we can double our population every thirty years. No other nation upon the earth increases at this enormous ratio, and it becomes a matter that must be looked at fully in the face. For instance, take the French nation. It has been computed by one of their people, accepted by them as an authority, that, building upon their present birth-rate ratio, in one hundred years from the present time they would not be more than 69,000,000 strong. Supposing even the Germans to keep up their present birth ratio in the same time, they would not exceed 130,000,000 of people, whereas, in the same time, keeping up the present ratio, in one hundred years from now the British race will number 1,000,000,000, and the American race will number 800,000,000. That we shall and must keep up this ratio is guaranteed by the word of God, who has promised to Israel that, "Thou shalt increase as thou hast increased," meaning, of course, that the ratio shall be preserved. London numbers five millions of inhabitants; last year seventy miles of new streets were formed, and the great problem of the people in the country districts is how to feed the



people of London ; and, with the enormous growth of the people, should it not be a problem how to provide outlets for them ? But let the Americans also look to their homesteads. They belong to a race distinct and separate from all others. Their Anglo-Israelite descent becomes of valuable import to them. It is the only question that can rightly govern their state councils. Because God has provided for them a widely spread home, it by no means follows they can be profligate with its resources. The great thing to remember is that it is *their* home. God has expressly provided this large country for their use, and these figures show that they can soon stock it with their own people, and may soon require other large districts for their accommodation ; that it becomes a vital question whether it is statesman-like to open its gates widely for all comers, and to allow these comers equal privileges with themselves. The more so as it is the great privilege God has bequeathed to Israel, and only to Israel, "to suck the breasts of the Gentiles," meaning they, the Gentiles, are required by God to occupy an inferior position on the earth to Israel, which again is implied by the declaration made by God that, "the Gentiles shall serve thee." (See also Isa. liv., 3 ; lx., 3, 16 ; lxi., 6 ; Jer. xvi., 19, and hosts.)

It is right to remember that the whole of this prodigious increase and telling prosperity of the Saxons started from the period that the Anglo-Saxons, as having been identical with Israel, the only seed "called in Isaac" as Saxons, renewed their strength in the "Isles of the West." What could be a more conclusive EVIDENCE ?

*Evidence No. 12.—Our mission to establish the earth.*—It would be impossible to establish Israel's identity, unless with a people who in every particular brought forth fulfillments to the prophecies God gave Israel to respond to. We declare the Anglo-Saxons have given response to all, without a single exception, required to have fulfillment up to this time. We have traced her footsteps to the time she entered "the isles afar off," where she was to "renew her strength ;" in other words, to vastly increase in population. We are told by Isaiah what would happen to her in these very isles. The increase was to

become a burden to her. The sea on every side prevented her country from expanding. Her people so multiplied that they became cramped up for room in every direction. They had not space to give scope to their enterprises. The situation became alarming; the prospect of their future was distressing; the whole arising from their extraordinary multiplicity. All this is explicitly told us in the Bible, the dismal picture being presented through the vision of prophecy. What were they to do? There was only one way of escape, the sure way open to all of us in the time of distress; that was, take the matter to God, plead with Him before the throne; and they went to prayer. The simplicity of their prayers was truly beautiful; each petition was framed in dignity and force, and went with persuasive effect before the Almighty. They had entered these isles as "waste and desolate places;" they had become the lands of the exile, and had "even now become too narrow, *by reason of the inhabitants*"—Isa. xlix., 19 (increase of population), and Israel cried, "Give place to me that I may dwell." (v. 20.) God asks, "Can a woman forget her sucking child, that she should not have compassion on the son of her womb? Yea, they may forget, yet will I not forget thee; behold, I have graven thee upon the palms of my hands; thy walls (boundaries of territory) are continually before me." (v. 15, 16.) And thus the Lord answers their prayers, "Thus saith the Lord, In an acceptable time have I heard thee, and in a day of salvation have I helped thee: and I will preserve thee, and give thee for a covenant of the people, to establish the earth, to cause to inherit the desolate heritages." (v. 8.) Here is a direct instruction from God that Israel was to enlarge her walls, to lengthen her cords so as to take into her dominion other countries to serve as outlets for her people, and so ease the islands, saving them from overcrowding. This was the beginning of colonizing. They were "to break forth on the right hand, and on the left, and thy seed shall inherit the Gentiles, and make the desolate cities to be inhabited."—Isa. liv., 3. "Enlarge the place of thy tent, stretch forth the curtains of thy habitations: spare not, lengthen thy cords, and strengthen thy stakes." (v. 2.) By virtue of these Scriptures, it is evi-

dent that all the waste and desolate lands, with countries sparsely inhabited, that were in existence at the time of the issue of these prophecies, God directly and unconditionally has given to the seed of Israel, *i. e.*, to the Anglo-Saxons. We possess the prerogative to claim each one as our right; the promise belongs to the Americans equally with the British; each of us has the right of claim. God gave us these waste heritages in response to prayer, and Manasseh joined in those prayers. Manasseh was in the British isles at the time, and felt the inconvenience of being in a country too strait, too narrow by reason of the multitude of the people; and it is not only the privilege, but the duty of the Americans to take her fair share in the work of filling up the waste places of the earth. I claim for Britain the Transvaal, New Guinea, a South African dominion, Zululand, the Ashantee district, the Ionian islands, Creta, Afghanistan, etc. I see not why Africa should not be divided with America, specially the negro possessions. She once forced them from their country, and should now care for their land. We have the right of claim to the whole by the promise and will of God. America will look after Mexico and a lot of republics hanging about, panting for the arrival of men of enterprise; and, indeed, the whole of South America as far as I know. Russia may have most of Turkey, but England must possess Constantinople, with the Dardanelles to Troy. I bequeath Assyria, Armenia, Babylonia and close regions to Germany, and Cappadocia, Galatia, Bithynia, Macedonia, Illyricum and round about to Britain, with, of course, Palestine in the joint occupation of herself and America, and this probably is the ultimate way that England and America will finally establish the earth in obedience to the will of God.

EDWIN HINE.

[TO BE CONTINUED.]

## RUSSIAN METROLOGY.

## ITS AFFINITIES—THE TRUE POSITION OF THE ROYAL CUBIT.

A biographer (J. S. C. Abbott, in Harper's Magazine, several years ago) credits Bonaparte with having said: "Why, these Russians are a remarkable people; their archine is the same as our metre." With all his rascality and clap-trap, it may be doubted if Napoleon was so intensely silly.

The schedule will explain the theory of their striking system, better, perhaps, than it can be done in words. Two or three points of correlation were noted in the "Metric Analogues," but the subject was revived by a peculiarity in the markings of the Turin cubit, as they were communicated to me by Rev. H. G. Wood. That implement is divided into 28 digits, 25 of them uniform and the remaining three larger. A double line at the 24th digit marks off the ancient Egyptian cubit (precisely  $\frac{1}{100}$  of the Schoenus as quoted by Bishop Cumberland), now known as the Nahud cubit; the digit being the Egyptian digit of 0.7289 Pyramid inches. Thus 9 such digits (from the 15th to the 24th) mark the itinerary span, as I have termed it, and 30 such the Mosaic cubit as given by Cumberland, of which the 15th division marks the exact half. So that here we have the natural divisions of time in the day and in the calendar month. But the Mosaic cubit had also its special division into 24 digits. The 25 Egyptian digits on the Turin cubit may be construed as an index to the *number* of the sacred cubit itself, while the remaining digits, each =  $\frac{1}{100}$  polar cubit  $\times \pi$  = 0.7854 Pyramid inches, indicate, by their number and quality, the fundamental Egyptian division of the circle, the quadrature and (through the Egyptian system) the polar cubit and pyramidal inch as the modulus of the whole. The double line may additionally mark a small lack of correlation, or a correction, necessary in reducing from circumferential to diametric or linear measure. The markings indicate the decimal arithmetic,

and furnish all the main factors or ratios in practical geometry, and in fact point to the plan of the Pyramid and the Temple. Viewed in this light, it is a mathematical implement of wonderful power.

The equation, then, for its total length in polar cubits is:

$$L = \left\{ \frac{2 \times \sqrt[3]{a^2 b}}{9 \times 24 \times 10^7} + .03 \right\} \pi \pm C, \text{ which may be put in the}$$

$$\text{form, } L = \pi \times \frac{\sqrt[3]{a^2 b} + 1,296,000}{43,200,000} \pm C = 0.82314 \text{ cubits} \pm$$

$C = 20.5785$  Pyramid inches  $\pm C$ , in which a faint shadow of the Babylonian factors appears in the denominator and in one term of the numerator, by an arithmetical incident, resulting from purely Egyptian factors.

The Louvre cubit is a little shorter, having 26 Egyptian and two longer digits, making in all, as quoted, 20.5704 Pyramid inches. Assuming it to have been constructed on an analogous theory, it would be about 20.522. This might easily result either from excessive value in the digit or from a different value and contrary sign in the correction.

So many different versions of the royal cubit exist among the preserved specimens, and so many different indications of its length, ranging all the way between 20 and 21 inches, are reported by explorers of the monuments and temples, that any attempt to fix its absolute length as a standard, either by direct measurement or weighted mean, is hopeless. If it was the standard by which the Great Pyramid was built, it seems incredible that such variations should appear, in that structure at least. Petrie gives an exceedingly wide range of dimensions, in which he is fully borne out by Taylor, Professor Smyth and others; but giving weight to the king's chamber, settles upon 20,611+ for the cubit and 0.726+ for the digit, if we translate into Pyramid inches ('Temples and Pyramids of Gizeh,' pages 81 and 180). Ballard, from other considerations—among which is a rather refined projection of the Babylonian circle upon the polar axis—suggests 20,2006 geometric inches ('Solution of the Pyramid Problem,' New York, John Wiley & Sons, 1882, p. 16). And however well settled some form of it may have become among the architects of the later temples (Korak post-

dates the Pyramid by some eight hundred years), the above discrepancies suggest innumerable difficulties in the way of its being regarded as *the* standard of the Pyramid, and weigh with double force against any claims advanced in its behalf as the *sacred* cubit. And in any view, it is absolutely wanting in the simplicity of conception and comprehensiveness of office which attach to an emblem of the radiant "rod of God"—Light—which spans the typical circle from the centre to the circumference, from the Alpha to the Omega.

"And Aaron cast down his rod before Pharoah, and before his servants, and it became a serpent.\* . . . They cast down every man his rod, and they became serpents; but Aaron's rod swallowed up their rods."—Exodus vii., 10, 12.

And we can readily see how great a variety of cubits might result from the attempts of mathematicians to express logically the precept of "a cubit and a hand breadth," published by Ezekiel for the first time, so far as we knew, each one starting from some typical form with his own "personal equation" and individual theory of systems. In fact, Petrie notes a marking in the chambers of construction, the significance of which has been overlooked ('Temples and Pyramids of Gizeh,' p. 91.) It is a stone sixty-five inches long marked "3 cubits." The form of expression indicates that the inches are not given exactly but the quotation-marks suggest that the inscription is archaic, though he does not state in what language. The stone is an index to the *Mosaic* cubit. This confirms a belief suggested by the different indications before alluded to, that a variety of cubits might have been used about the Pyramid, including several versions of the royal. In such case a mathematician could easily mark each one, upon a principal like that indicated by the Turin cubit, so that the operation could receive precise instructions from the overseers, each band work with their accustomed cubit, the work fit to its place, prejudices as to standards humored, and the confusion of Babel avoided. Yet an index to the real standard, together with the principles of geom-

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\* Mark the Egyptian representation of the circle as a symbol of the Divine and the Eternal, an endless serpent with its tail in its mouth. . . . "Swallowed up," *i. e.*, logically *involved*.

etry and a key to the plan, would be presented, unknown, perhaps, to the operatives. Each implement, like the interior of the Pyramid, would express *ratio* in the same way as Gunter's rule, which may be made of any length and marked to any known scale we please.

It is remarkable that, by a very slight change in the correction, the Karnak rule and the royal cubit become respectively equal to the circumference and half-circumference of a circle upon the itinerary span as a radius. I have already shown (INTERNATIONAL STANDARD, September, 1884, p. 406) that this

span (in polar cubits  $= \frac{\pi \sqrt[3]{a^2b}}{12 \times 10^7}$ ) raised to the third power, is cosmically expressive of a fair ten-pint gallon, and in water of a ten-pound weight. Here, the exponents all being tripled,  $\pi$  would appear in the third power. But being simply a ratio, its exponent never affects the quality or power of any result into which it may enter, but simply modifies the dimension. Yet the powers of  $\pi$  are necessary in the expression of physical correlations. Hence this form of the royal cubit, considered as a function of the polar cubit, may be convenient in settling correlations among the units of force, energy and effect in the simplest manner. It may be of especial value to electricians.

Its equation is 
$$L = \pi \times \frac{\sqrt[3]{a^2b} + 1,296,000}{43,200,000} \pm C = \frac{\pi^3 \sqrt[3]{a^2b}}{12 \times 10^7} = 0.8244 - \text{polar cubits} = 20.6089 - \text{Pyramid inches, which is the value I have used in the conspectus. The Babylonian factors disappear, and the dimension coincides fairly with the most approved determinations known. A variety of other interpretations have been suggested, formed upon geometrical or arithmetical operations with the inch as a unit, resulting in about the same number, } 20.626 \pm.$$

It might be hazardous to assert that this particular cosmic relation, together with all the rest which have been pointed out or may be found, were present to the inventors of the implement or to those who finally settled its prevalent dimension. But conceding all, and that it was a device of men of almost boundless knowledge of geometrical and cosmical relations, it appeals rather as a complex function of the polar cubit and

inch, a working mathematical instrument,\* a concrete *X* or solved equation whereby an educated man could work out a variety of problems and illustrate a wide range of facts, than as a radical standard measure of itself. It is an index or pointer to Nature, to the Pyramid and Temple perhaps, and to the true metron; but withal, a creation of the human mind, and no more to be called the sacred cubit than are the best of commentaries and expositions to be confounded with the Divine law. This is, in fact, suggested by its traditional name—the *royal cubit*—and confirmed by its absence from all systems except those traceable to Babylon. The Russian system is a most remarkable case in point.

In the table of "typical cubits, etc.," the computations are based on Clarke's estimates of 1878. With a barely microscopic allowance upon the Mosaic and Egyptian cubits, and such dimensions as are given in even British inches, the relations are exact to one-eighth of an inch in the mile.

The Russian system points clearly to the Temple, the Tabernacle, the Pyramid (and, I almost think, indirectly to Ararat), and connects with the Egyptian by factors, which are Phœnician, Syriac and Hebraic, but decidedly not Babylonian. It is ancient. It cannot be accounted for by the march of Dan, nor of the Saxons, nor of the Normans, nor yet of the Saracens. It has too little in common with what they have left, or with the other European systems. Its connection with the Swedish, Hanover and Brunswick mile indicates that it antedates the invasion of Amurath I, for, as I understand it, after that invasion the Russian kingdom and learning lapsed into almost absolute zero and night, till the shield and sword of Sobieski interposed.

Who, then, and whence are these people, the present dominant element in the Russian empire? Is it possible that by some movement of which the historical traces have become lost or nearly effaced, the dispersing tribes swarmed over the Altai into Tubal, and thence over the Ural (or by distinct move over the Caucasus) into Meshech, and made at least as strong

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\* For a charming and brilliant elucidation of the surpassing power of the sacred cubit as a mathematical instrument, see Lieutenant Totten's great work, 'An Important Question in Metrology,' p. 155 *et seq.* (Imp. John Wiley & Sons, New York, 1884).



an impression as they appear to have done in the other direction? I allude to certain features in the Brahminism and Buddhism of the Indies. Perhaps comparative metrology may yet lend aid to philology in solving this and kindred problems.

JACOB M. CLARK.

New York, July, 1885.

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### THE DRUIDS.

“For the statutes of Omri are kept, and all the works of the house of Ahab.”—Micah vi., 16.

Recently I have found the Bardic sign for the name of Jehovah, and traced its correspondence with the tetragrammaton. This Druidical sign was formed of three short, converging, straight lines, not quite meeting in a point at the top. In a manuscript found among the few preserved treasures of Raglan castle—which stupenduous structure, somewhat like the Pyramid, seemed to have contained the foundation of all truths—these lines are said to be the vocalization of the name of God, as melodiously sounded at the creation. No mortal was permitted to attempt its utterance. In examining the sign, I find it composed of the Celtic letter jodha (our I) three times repeated. This letter is the yod of the Hebrew and the iota of the Greek. In the Samaritan alphabet it is composed of three lines; in the Etruscan and Cadmean it is one line, like our printed capital letter I without the cross pieces. The tetragrammaton is the yod three times repeated; the Bardic sign is the jodha three times repeated. In each we have a three-fold expression of the Divine existence; in each a trinity in unity—three persons in one God.

Thus, also, did the Druids preserve the sacred revelation so carefully guarded by the House of Israel, and reverence the unpronounceable name, the “I Am,” the Jehovah, “which was, which is, which is to come.”

An Irish secret alphabet has come down to us called Ogham Beth-luis-nion, from its first three letters. Mr. Toland says the

word Ogham, written Ogam, Ogum or Ogma, signifies in Ireland the secret of letters, and Mr. Higgins believes that one of the ogums was the secret and sacred character of the Druids. St. Patrick is said to have destroyed three hundred books written in this language, considering them as magical, and therefore sinful. In Welsh the word Ogan means augury, or divination, thus preserving the idea of magical characters. Aos in Irish curiously signifies both a tree and knowledge, and the alphabet was to our ancestors a wood or forest; the Beth-luis-nion system was a tree; the upright trunk the alpa (also Chaldaic for trunk of tree); the letters were the leaves; the fruits were the teachings or doctrines growing out of the system. The worship of trees, previously referred to, was thus combined with the priestly secret knowledge, and came to the people as part of the sacred religion to which they could bow in humility, but not presume to understand or to question.

The Druids said they inherited the secret system of letters from remote antiquity. Taleisin says the magical lore was taught to him in *Hebraic*. One of their customs seems to have been of Phœnician origin, that of carving words upon rods or staffs made square or three-sided, on which the letters could readily be cut upon the flat sides, as they were simple in form, being composed of straight lines. The Arch Druid performed miracles with his magically carved staff and prophesied by its help.

"My people ask counsel at their stocks, and their staff declareth unto them, . . . therefore the people that doth not understand shall fall." Hosea iv. 12-14

Their wisdom was not all committed to writing, most of their instruction was oral, and twenty years were sometimes required before the novice was able to take his place among the prophets. These prophets—termed Eubages or Vates—professed to foretell future events; it was especially their business to watch the stars, "the disposers of the affairs of men," and to settle the times of the festivals by their observations. These "observations" included the influence of the stars on all things connected with man, not only in life, but in regard to the time and manner of death. This learned class naturally obtained control of the state as well as the church. Their judgment was final, and

as there was no appeal, their power was abused by fearful cruelties and oppressions; they coveted the very "dust from the head of the poor" (Amos ii. 7), while they lived in corrupt luxury. They made feasts of their sacrifices, and pageants of their religious services, at which the people gazed, but in which they had no part, except sometimes to enlarge the processions or to join in the choruses, for music both vocal and instrumental was a very important part of their worship.

"Wo to them," saith the Lord, "that trust in the mountain of Samaria, . . . to whom the house of Israel came. . . That lie upon beds of ivory. . . That chant to the sound of the viol, and invent to themselves instruments of music, like David; that drink wine in bowls, and anoint themselves with the chief ointments, but they are not grieved for the affliction of Joseph." Amos vi. 1-7.

"Your treading is upon the poor, ye take from him burdens of wheat, . . . Take thou away from me the noise of thy songs, for I will not hear the melody of thy viols, . . . I will cause you to go into captivity beyond Damascus, saith the Lord, whose Name is the God of Hosts." Amos v. 11-27.

The bards of the middle ages speak often of a traditional mystic caldron of wisdom. Taleisin says it was the fountain of his genius. In his initiation we are told that when three drops of the water of this sacred vase touched the lips of the bard, the future became known to him. Druidesses were also initiated into the mysterious wisdom of the order. Higgins says the Northerners called them Alirunæ. They had charge of the sacred fire, which was like that among the Jews, which tradition tells us must not be polluted by being blown with the breath, and which must be fed with peeled wood. It is said that future greatness was foretold Diocletian by a female Druid. There were prophetesses in Israel, but it was to those who had lost the purity of their faith to whom the Lord spoke.

"Likewise thou son of man, set thy face against the daughters of thy people, which prophesy out of their own heart, and prophesy thou against them, and say . . . Because with lies ye have made the heart of the righteous sad, whom I have not made sad, and strengthened the hands of the wicked . .

by promising him life . . . therefore ye shall see no more vanity nor divine divinations." Eze. xiii. 17-23.

In certain festivities particularly in those of marriage, the Druids offered drink-offerings and cake to the Queen of Heaven. (The word Holycake is yet a family name.) They said that those who ate of it, would see their future partners in a vision. This custom is still observed among us, although we have modified the "vision" into a dream. The drink-offering was passed around from east to west, according to the course of the sun, before it was poured out as a libation. Even now at public dinners the goblet is passed to the left hand, but the liquor is drank in healths instead of being offered to the gods. (Have we in this case improved on the customs of our ancestors?) It is said that a London cabman pours a part of his ale on the ground, without suspecting that he is performing an old religious ceremony.

Honey and water was one of the ancient drinks. The Welsh required a bride and groom to drink it for thirty days after marriage, hence our honey-moon. These customs, which were once part of the universal idolatry, are *as worship* condemned through the prophet Jeremiah.

In Jeremiah xlv. 17, we read the expressed determination of the people who were left after the destruction of Jerusalem to continue their idolatrous practices, and as these were the same as those for which Israel had then gone into captivity, the same description applies. "As for the word that thou hast spoken unto us in the name of the Lord, we will not hearken unto thee, but we will certainly do whatsoever thing goeth out of our own mouth, to burn incense unto the Queen of Heaven, and to pour out drink-offerings to her, as we have done, we and our fathers, our kings and our princes, in the cities of Judah and in the streets of Jerusalem: for then we had plenty of victuals and were well and saw no evil. And when we burned incense to the Queen of Heaven and poured out drink-offerings unto her, did we make her cakes to worship her and pour out drink-offerings unto her without our men? . . . Then Jeremiah said unto all the people which had given him that answer, saying, The incense that ye burned, ye and your fathers, your kings and your

princes, did not the Lord remember them, and came it not into his mind? So that the Lord could no longer bear the evil of your doings. . . . Because ye have burned incense, and because ye have sinned; . . . therefore this evil has happened unto you." So was Judah—Aholibah—filled with the cup of Aholah, her sister Samaria, "the cup of astonishment and desolation."—Ezekiel xxiii. 33.

"Thou hast set mine oil and mine incense before them (saith the Lord God); my meat also which I gave thee, fine flour and oil and honey, wherewith I fed thee, thou hast even set it before them for a sweet savor."—Ezekiel xvi. 19.

"For she did not know that I gave her corn and wine and oil, and multiplied her silver and gold, which they prepared for Baal. . . . I will visit upon her the days of Baalim, wherein she burned incense to them . . . and forgat me, saith the Lord."—Hosea ii. 8-13.

In regard to the use of the word Baalim, in the plural form it represents the all-embracing Baal, not only the great Father, but the sun, recognized as the great beneficent power of nature, to whom all the products of the earth are referable. The worship of this power was the fundamental idea of all oriental idolatry, and may be traced in every country to which the eastern migration reached. The name of Baal or Bel, means governor or lord; it is compounded with whatever words express especial exhibitions of his power. We have Baal-Peor, Baal-Ram, and hosts of others, among them Baal-Zebub, the lord of the fly; worshiped at Ekron; spoken of by Pliny as the fly-god. Also Baal-Sameen, or Baal-Samhan, much revered by the Druids, who called him the lord of death, and who considered him the judge of the dead, as also the Mediator, giving the idea of merciful judge. "The annual solemnity instituted to his honor is yet celebrated in Ireland on the evening of the first day of November, and is called the 'Night of Samhan.'"—*Higgins*.

Baal-berith is the covenant Baal, or the god who enters into covenant with the people. Of this the Lord reminds Israel when her restoration is promised, "I will take away the names of Baalim out of her mouth, and they shall be no more remem-

bered by their name. In that day I will make a covenant for them with the beasts of the field and with the fowls of heaven, and with the creeping things of the ground, . . . and will make them to lie down safely."—Hosea ii. 17, 18.

Thus the Lord asserts His superiority to every conception of Baal, in that he alone can make a covenant of safety for his people.

There is a more than usual mixture of truth and error in this covenant Baal, the Baal-berith of Israel, the Mithra of Persia and of the Druids. Mithra was the mediator, as well as the maker of the covenant, and when at the festival the bull was sacrificed, evil was typically suppressed and earth and heaven rejoiced, the *earth* representing the joy of heaven by the circular dances of the priests and other imitations of planetary motions, still kept up by the Dervishes and Shakers.

The birth of Mithra was celebrated by the Druids, the Persians, and other nations, on the night of December twenty-fourth. The twenty-fifth the Druids called Noel or Nollagh—the day of regeneration, celebrating it with great fires on the top of the mountains. There are accounts of the celebration in Gaul 100 B. C. This was the month of the Roman Saturnalia, when landlords and laborers feasted together—the servant in the palace of his king; the same license appears in the Druidical festival. In Persepolis a remarkable temple front is described, on which is represented a man with wings seated on an arch, which seems to be intended for a rainbow. This figure is described as Mithras Bovinus.

But to return to the Druids. "There are ruins of a Druidical temple at Brimham Craggs, not far from Iseur, now Aldborough, the capital of the Brigantes as well as of all Britain, removed to York, the Celtiberean settlement of Ebora—latinized Eboracum by the Romans, after they had conquered the country. The town was probably built out of the Druidical temple there, of which only three immense pillars now remain. The numerous beautiful Mosaic pavements yet to be seen at Aldborough prove its ancient magnificence. The word Iseur is curious; it signifies Saviour, from the Hebrew Iso, to save. The Persians applied this epithet to the Sun, as Mithra, or the

Sun which saved them annually from the empire of Ahriman, or darkness, the six months of winter. In York one of the streets which runs into the most ancient part of the town called Aldborough, is called Saviour Gate, thus the new citizens imitated the old ones in the names of their streets".—('Higgins Celtic Druids,' p. 195).

To those who had in these strange idolatries darkened counsel, the Lord spake through His prophets: "Thus saith the Lord that created the heavens: God himself that formed the earth and made it. . . . I have not spoken in secret, or in a dark place of the earth. . . . Assemble yourselves, ye that are escaped of the nations, they have no knowledge . . . that pray unto a god that cannot save, . . . there is no God else beside Me, a just God and a Saviour."—Isa. xlv., 18-21.

The Druids celebrated the return of each new and full moon, and even now in some parts of Great Britain the silver crescent is formally saluted, without any idea that the reverence is a remnant of Druidical superstition. The feast of the new moon was among those appointed for Israel, but the idolators sinned in adding vain abominations to the worship of Jehovah, and in adoring the creature instead of the Creator. A sacrifice offered by one created being to another had no meaning. It was the mediator between God and man, who was typified by the appointed offerings, and to the idolatrous priests the Lord said: "Though you offer me burnt offerings and meat offerings, I will not accept them."—Amos v., 22. It is said that the Druids kept Sunday as a feast day instead of the ancient Sabbath, paying especial adoration to the lord of the sky on the day that bore his name. To such vain worshipers the Lord spoke: "I will cause her mirth to cease, her feast days, her new moons, her Sabbaths, and all her solemn feasts, I will visit upon her the days of Baalim."—Hosea ii., 11.

It was on the sixth day after the new moon that the sacred mistletoe was gathered. Pliny says "the Druids held nothing so sacred as the mistletoe, and the tree on which it grows, provided it be an oak. They make choice of oak groves in preference to all others, and perform no rites without oak leaves.



They think that whatever grows on these trees is sent from heaven, and is a sign that the Deity has made choice of that tree. But as the mistletoe is seldom to be met with, when found it is fetched with great ceremony, and by all means on the sixth day of the moon, which with them begins the months and years, and the period of thirty years, which they term an age. They call this plant, in their own language, "all heal," and after preparing for the sacrifice and feast under the trees, they bring up two white bulls, whose horns have been then bound for the first time. The priest, habited in white, mounts the tree, and with a golden hook cuts the mistletoe, which is received in a white cloth. They then sacrifice the victims, praying the Deity to render this, his gift, favorable to those to whom they distribute it.

The "white cloth" is elsewhere described as a short white mantle termed a *sâch*. May not the short white garment now worn by women, and called a "sack," have received its name from this one of the priestly robes? This word is said to be in all languages, meaning either a bag or loose garment. In Welsh it is *sachell* or *sach*; in Gael and Irish, *sac*.

Weaver, in his 'Monumenta Antiqua,' says: "The Druids, like the Israelites, looked for a Redeemer. The mistletoe was an emblem of Him who was to come, and the Druids called it 'curer of all ills.'" The oak, in its strength and vigorous life, they considered a fit emblem of the Almighty, and with the mistletoe twining itself among the branches, it represented that tree of life whose "fruit shall be for meat and the leaf thereof for medicine."—Ezekiel xlvii., 12.

Thus continually did they mingle truth and error, for "Ephraim was oppressed and broken in judgment," and "willingly walked after the commandments." "Therefore will I be unto Ephraim as a lion, . . . and none shall rescue him . . . till they acknowledge their offense and seek My face."—Hosea v., 14.

To the priests who taught falsely, the prophets had an especial message: "Wo be to the shepherds. . . . The diseased have ye not strengthened, neither have ye healed that which was sick; . . . therefore I am against the



shepherds. . . . I will search my sheep and seek them out, . . . and I will raise up for them a plant of renown." —Ezekiel xxxiv.

The significance of this expression seems very great, connected as it is with a reproach for not healing the sick. The combined magic and mystery of the oak and the mistletoe, with their professed healing powers, were known throughout the nation, and crowds rushed to obtain a leaf whenever the mistletoe was discovered; this, then, was to the followers of Druidism emphatically a "plant of renown." Isaiah i, 29, 30, has a like allusion: "They shall be ashamed of the oaks which ye have desired, and ye shall be confounded for the gardens which ye have chosen, for ye shall be as an oak whose leaf fadeth." This chapter of Isaiah, although not expressly addressed to Israel, was spoken nearly fifty years before the dispersion or captivity of that nation, and describes the "Sin of Samaria," in which both Israel and Judah were at that time involved. It had been for a hundred and fifty years the court religion of the ten tribes, and seemed to possess a wonderful fascination for Judah. Isaiah calls heaven and earth to witness the rebellion of the children of God, and speaks to them as rulers of Sodom and Gomorrah—a form of address meant to indicate the lowest vices and darkest idolatry. His prophecies include both divisions of the nation, which is also true of those of Jeremiah and Ezekiel, although they prophesied after the captivity of Israel, and were themselves among the captives of Judah. It is supposed their writings were received by their brethren in Assyria, as naturally every possible communication would be kept up during the first years of their separation.

A nation of wise men were these Druids, votaries of science—falsely so called, diviners, soothsayers; watchers of the heavenly bodies, asserters of their own power and skill, prognosticators of judgments on the earth, such as eclipses, which they carefully calculated, and which they foretold with an accuracy terrifying to the ignorant. On them the curse fell, for the Lord had said: "I am the Lord that maketh all things, that stretcheth out the heavens alone, that spreadeth abroad the earth by myself.—Isa. xlv., 24. "I form the light and create dark.

ness" (xlv., 7.) "That frustrateth the tokens of the liars, and maketh diviners mad" (xlv., 25), and surely they were made mad when they strove to mix the paternal relation with the most revolting cruelties. One of their sayings was that a stone is not nearer the earth than the heart of a Druid to his people, and yet one of the offerings to the spirit of Saturn—the Moloch of the Phœnicians, the god of war, to whom fire, both as destroyer and purifier, was sacred—was a wicker frame filled with little children, who were burnt alive to this god. The agonized parents were required to look on, and were forbidden one human cry, the Arch-Druid (or fiend) consoling them by a promise of future happiness to the tortured infants, and of pardon to the hardly less tortured mothers. It was the mixture of the lion and the lamb. The Inspired Word tells of an institution that bears strange likeness to that of the Druids. It was a beast that came "out of the earth, and he had two horns like a lamb, and he spoke as a dragon."—Rev. xiii., 11.

We shudder as we read of these burning children, and are thankful that light has come to us. But not much over a hundred years ago, even in our favored land, a New England divine, unconscious that he was descended from the royal line of Cymric princes, or that his ancestors may have joined in the sacrifice to Moloch, preached that hereafter parents will sing hallelujahs as they see their children "roasting" forever. He was less tender than the loving Druid, for he gave no hope that the torture or the hallelujahs would ever cease. Such is the descent of faith, and our belief in our Israelitish origin may be increased when we find that we have inherited idolatries as well as truths.

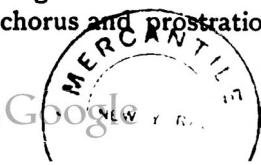
In Scotland a newly baptized infant is waved several times over a flame with the words "Let the flame consume thee now or never." The people leap through the mid-summer Bel-fire, while in Ireland the cattle are driven through it. Our children build bonfires (Saxon *bene* or *bone*, a favor,) and jump through the flames. All these customs being reminiscences of the Druidical idolatry, as well as of that which the prophets condemn as the sin of Israel. They caused "their sons and their daughters to pass through the fire to Moloch, which I commanded them

not."—(Jer. xxxii. 35.) "Thou hast taken thy sons and thy daughters whom thou hast borne unto me—thou hast slain my children and delivered them to cause them to pass through the fire."—Ezekiel, xvi. 20-21

The account of their idolatries and, if we had time, their comparison with and likeness to those particularly of India and Persia might be prolonged indefinitely, but I will close this branch of my subject by a short account of the worship of

#### THE SUN IN TAURUS.

In all ages of the world the nations have hailed with delight the return of spring, and the revivification of nature under the warmth and heat of the sun. His winter absence gave rise to fearful rites of darkness and mystery, but his return was ever a time of joy and gladness. This universal festival we know as May-day, on which day the wise and never-dying astronomer tells us the sun at the vernal equinox, 4000 B. C., entered the constellation Taurus. This gives us about the era popularly known as the Creation, and a double reason for an observance so wide spread that I have called it universal. It is still observed in all parts of Great Britain, among us, and in India and Persia. In Persia it is the "Salutation of Mithras;" forty days were set apart for thanksgiving and sacrifice. Before the rising of the sun the procession was formed. First the High Priest, then a long train of the Magi, in white robes, carrying the sacred fire in censers and chanting hymns. They were followed by three hundred and sixty-five youths, dressed in scarlet. The Chariot of the Sun, decorated with flowers, and drawn by white horses, caparisoned in gold, came next. Then a white horse of exceeding beauty and size, with ornaments of gorgeous gems on his head, in honor of Mithras. The King in an ivory chariot inlaid with gold, was the next spectacle, and following him, his kindred and nobles riding on richly caparisoned camels. This procession ascended Mt. Orontes. The high priest was crowned with a tiara of myrtle and hailed the first rays of the sun with incense and prayers. The Magi sang hymns to Ormuzd the source of blessing, who sent the glorious Mithras to gladden the earth and preserve life. A chorus and prostration



closed the ceremonies. (Compare with reformation of Josiah, 2 Kings xxiii. 1-4.) The rites of the Druids on this occasion are thus described by Davies. (Myth. p. 369.) "In the festival of May, they celebrated the praise of the holy ones, in the presence of the purifying fire, which was made to ascend on high. On the Tuesday they wore their dark garments, on the Wednesday they purified their fair attire, on the Thursday they truly performed their due rites, on the Friday the victims were conducted around the circle, on the Saturday their united exertion was displayed without the circular dance, on the Sunday the men with red blades were conducted around the circle, on the Monday was seen the deluge of gore up to the belt."

The first day of May was known among them as Bal-tein or Bal-tane. A town in Perthshire still has the name of Tillie-Beltane, the hill of the fire of Baal. The remains of a Druidical temple are near, marked by eight upright stones; not far off is a well, still held to be magical, and a procession of the superstitious on Beltane morning walk nine times around it. In some places the boys meet on the moors, where they cut a trench in the sod of sufficient size for them all to stand within it. They build a fire and make a sort of custard, which is eaten, then they make a cake of oatmeal, which is toasted and divided among them in equal portions. They blacken one piece with charcoal, then put all in a bonnet, from which they draw them, being blindfolded; whoever draws the black piece is the one devoted to Baal. Once he was undoubtedly sacrificed to the sun-god, but now he is only required to leap three times through the flames. Baal is then propitiated, and trusted with the fertility of the coming year. Another of the ceremonies still continued is dancing around a May-pole, and all of them tell of the ancient sacrifices and planetary dances.

If these widespread observances do not mark the era or creation, there is still sufficient reason for the commemoration of the time of which Virgil speaks "when the bull with his horns opens the vernal year," because in all the heavens there is no more magnificent group of stars than Taurus and the surrounding constellations. No more significant names than those in Taurus are found in any other sign. They tell of the glory and

might of the conqueror, to us the Saviour ; to heathen nations, Baal, Mithra, Appollo, Hercules, and all the others that personate the lord of the sky, as well as of the heavens above. Let us for a moment consider the names of the stars that have come down to us from earliest ages (the exact meanings I take from Mazzeroth). In Hebrew, Arabic, Syriac and Coptic the word for bull means coming or who cometh. The grand group of the seven stars or Pleiades (congregation of the judge) contains a star supposed to be the central sun, and named Al Cyone—the centre—a fact probably unknown to Maedler when he directed his telescope to it. Another star of the same group means, "centre of revolving." The great Al Debaran, one of the royal stars, means "the leader." There are four of these, according to the Persians, which marked the four colures, Al Debaran in Taurus, Regulus in Leo, Antares in Scorpio, Fomalhaut in the Southern Fish.

Closely following Taurus comes Orion, the grandest constellation of the heavens, and the one that bears the strongest resemblance to a figure. In Hebrew the name means *coming forth*, as light. Of the stars in the constellation four signify *the mighty, the Prince* ; five say, *he cometh* ; three say, *bruised and wounded*, and Rigol, the foot, in the ancient zodiacs, is treading on a serpent. The three orbs of light in his belt point directly to the brightest star in our heavens, well named Sirius—the *Prince*. The apparent entrance of the sun, at the spring equinox, into the leading constellation of this group might well be celebrated by the very stars that sung together at the creation, whether or not they marked that event. Maurice says "I have little doubt that May-day, or at least the day on which the sun entered Taurus, has been immemorially kept as a sacred festival from the creation of the earth and man, and was originally intended as a memorial of that momentous event."

Although the festival of May-day is still observed, there is this fact, however, to be noticed : it has long been in memory of a *past* truth, for in the revolution of years the sun retrograded in his time of crossing the equator and came earlier every year to the stars in Taurus, until at last at the spring equinox, he entered the constellation of Aries. It is said that April fools

day marks that change. If so, I will hazard the conjecture that the event was a surprise to the early astronomers, and the custom of sending on fool's errands told how often they had watched in vain for the coming of that star among the stars that seemed his fitting court of glory. The first of April is celebrated in Persia and is called the Naurutz.

"When Sir Thomas Roe was ambassador at Delhi, this festival was celebrated with astonishing magnificence. When in Persia, some of the ambassador's suite were deputed to congratulate the Shah on the first day of the year. They found him at the palace of Ispahan sitting at a banquet, having his astrologer near him, who rose up ever and anon, and taking his astrolabe went to observe the sun. At the very moment of the sun's reaching the equator he published abroad the new year, the commencement of which was celebrated by the firing of great guns from the castle and city walls, and by the sound of all kinds of musical instruments. ('Celtic Druids,' page 152).

This festival was celebrated in Britain with rites very like those of May-day, but have all passed from memory except the custom of making April fools.

At what date the early astronomers fathomed the mystery of the precession of the equinoxes we cannot tell, but that they accomplished this is certain; they also divided the zodiacs into 360 degrees, and calculated the great cycle of the universe (the Platonic), during which the equinoxes would pass through all the signs, thus numbering the hours that are marked on heaven's dial plate. Stonehenge tells us that the Druids knew all this, and the planetary dances (from which our ballet) tell how they celebrated the movements of the stars. Sixty-six years before Israel was carried into captivity the Lord said "Seek Him that maketh the seven stars and Orion, and turneth the shadow of death into the morning, and maketh the day dark with night. The Lord is his name."—Amos v., 8.

E. BEDELL BENJAMIN.

## THE ALTAR AND PILLAR TO JEHOVAH.

### X.

"Familiarity breeds contempt," and the rule is not invalidated by the too familiar title at the head of this article. Therefore, should the writer happen to contribute anything further on this subject, it will be under a different caption. But before bidding adieu to the old one, I beg leave to correct a few mistakes—one mistake of commission, another of omission, and two or three mistakes of people in general.

In my last article, which appeared in the May number of this Magazine, I committed a gross blunder in regard to the situation of the niche in the queen's chamber of the Great Pyramid. Nobody seems to have considered it worthy of notice, but possibly this correction of it may call attention to the very important truth in the matter, as standing forth all the more conspicuously for the shadow which it casts in the sunlight. The mistake is this: "Imagining the statue standing in its place, the curious fact of its situation northward of the middle of the east wall may be taken as an indication of the direction from which the original came into Egypt, and in which his bones would return to the 'parcel of ground' given him by his father Jacob in the land of Canaan." This was said of the traditional diorite statue in the niche of the queen's chamber, and of the inference to be drawn from it in regard to the builder of the Great Pyramid. The corrected sentence is this: "Imagining the statue standing in its place, the curious fact of its situation *southward* of the middle of the east wall may be taken as an indication of the direction of its fellow statue in the temple of the Sphinx, to whose side it was destined to be transported." This is in accordance with the absolute fact in the case, from which alone the logical conclusion can be the true one. Whoever has taken the trouble to read my last article must see at a glance that the sentence so corrected would have exactly suited

my more important purpose—that of identifying the traditional diorite statue in the niche with the actual greenstone statue represented and described in Rawlinson's 'History of Ancient Egypt' as one of the two contributed by Cephren to the temple of the Sphinx, whence it has been removed to the Boulaq museum in Cairo. It would have thrown discredit upon the supposition that the two only realistic statues in the long art-history of Egypt represented Cephren, a mere Egyptian Pharaoh, and were contributed by him to one and the same place, at one and the same time. Indeed, it would have comported perfectly with this question of mine in regard to that matter: "Is it not more in accordance with the fitness of things to believe that the person was the prime minister of Cheops and Cephren, and that of his two statues Cephren contributed one to the temple of the Sphinx and the other to the 'secret place' of the Great Pyramid, to signify the authorship of the two grandest monuments on the Gizeh rock by one and the same inspired personage, and their intimate relation to each other as representing the relationship between the earth and the signs of the zodiac."

I may say, therefore, that though it is mortifying to have built on so glaring a mistake, I can gracefully abandon the false foundation in the interest of strengthening the true one. My position now is, that in the singular position of the niche in the queen's chamber, the "altar to Jehovah in the midst of the land of Egypt" points out the "image to Jehovah at the border thereof," though I am far from wishing this conclusion to be accepted till it shall have been proved to a demonstration. At present I claim only that the image in the *temple* of the Sphinx was pointed out by its fellow image in the niche of the queen's chamber, connecting the Great Pyramid with the Great Sphinx in a manner suggestive of something profoundly significant and important.

We now come to my great sin of omission, which some may think a more serious mistake than the one of commission. In my article previous to the last, which appeared in the March number of this Magazine, I made a number of quotations from Professor Smyth to the effect that the first impression of the granite coffer in the king's chamber is that of a sarcophagus,



and I applied this testimony to the support of my idea that the king's chamber was the sepulcher of Joseph, without quoting the Professor's express opposition to like notions held previously by somebody else. Well, "never too late to mend." What Professor Smyth says on the point in question is this:

"Gradually the notion grew that it might be a sarcophagus, that it was a sarcophagus; and that it had been intended for 'that Pharaoh who (in 1542 B. C.) drove the Israelites out of Egypt; and who, in the end, leaving his carcass in the Red Sea, never had the opportunity of being deposited in his own tomb.' But this idea was effectually quashed; for, amongst other reasons, this cogent one—that the Great Pyramid was not only built, but had been closed up, too, in all its more special portions, long before the birth even of that Pharaoh—nay, before the birth of Isaac and Jacob as well—which disposes likewise of the attempt to call the Great Pyramid 'the tomb of Joseph,' whose mortal remains being carried away by the Israelites in their exodus, left the vacancy we now see in the coffer or stone box."—('Our Inheritance,' p. 129).

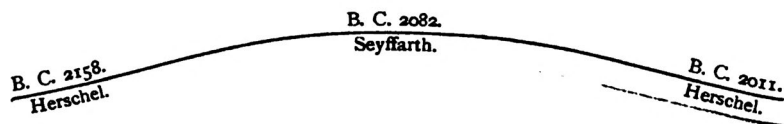
There is no denying the sweeping character of these declarations from the mouth of our highest authority on the subject of the Great Pyramid, and the only alternative is to answer them, or else confess to a gross anachronism in assigning Joseph and the exodus to the fourth dynasty of the Pharaohs, rather than to the nineteenth. It must be said, therefore, that to have been consistent with himself, Professor Smyth should not have written of the granite coffer what I quoted from him in the March number of this Magazine, or else should have written instead of the above: "Gradually the notion grew that it was *not* a sarcophagus, that it was a mere weight-and-capacity measure, and that it had been intended to show to the Anglo-Saxons their inheritance in the weights and measures of the Great Pyramid, together with the Great Pyramid itself, from that most mysterious of ancient personages, Melchizedek." Consistency also requires of the Professor not to have said so much about the unreliability of the Egyptian chronology, or else to have spoken less positively concerning the time of Joseph in Egypt and the date of the overthrow in the Red Sea.

On p. 519 of 'Our Inheritance' he says: "There is actually a dispute between the Egyptologists on the one side, and the Alexandrian-Greek classics on the other, whether there was ever a fourth dynasty at all;" and on p. 523 he says "that the names of the pyramid-building kings of the fourth dynasty of the Egyptologists are, by these same Egyptologists, on the authority of Herodotus, Eratosthenes, Diodorus and Strabo, placed after those which are found in the comparatively late nineteenth dynasty." Now, if these kings and their pyramids can be logically translated from the nineteenth to the fourth dynasty of Manetho, is it not possible that Joseph and the Israelites in Egypt may be logically translated from the nineteenth to the fourth dynasty along with them? In answer to this question allow me to quote from that very learned archæologist, Gustav Seyffarth:

"Since the destruction of Jerusalem it has been a subject of controversy in the Christian church whether the Hebrew text or the Greek translation, *i. e.*, the Septuagint, contained the true chronology. But it is now ascertained that a certain Akiba (Aquila), as was asserted already by Arabian writers and several church fathers, actually corrupted the Hebrew text, in order that the Messiah, whose advent was promised to take place during the sixth year thousand after the creation, might be waited for 1500 years longer than the appointed time. Many have hitherto believed that the chronology of the Bible is discredited by Manetho and the Egyptian monuments. Now it is certainly known that two agree precisely, even to years and days, and that both place the creation and the deluge in the same years and upon the same days. The sojourn of the Hebrews in Egypt was even regarded as a myth. Now it has been positively ascertained that Manetho's shepherd kings (Hyksos) were the Hebrews, and that they established themselves in the land of Goshen in the year 2082 B. C." ('Summary of Recent Discoveries in Biblical Chronology, Universal History and Egyptian Archæology.')

Now, to be able to fall back upon such authority as this for support to my theory of Joseph in Egypt at the time of the building of the Great Pyramid, is no small comfort; for if Jos-

eph was there at that time there is every reason to believe that he was the builder. The difference between 2082 B. C. and Sir John Herschel's last and most approved pole-star date of the foundation of the Great Pyramid, 2158 B. C., is but seventy-six years—only so many years too late, or, as I would say, only so many years after Joseph's accession to power at thirty years of age, and only fourteen years before his death at one hundred and ten, at which time, under the full blaze and effulgence of his monumental wisdom and goodness, it might well be said that "the Hebrews *established* themselves in Goshen." Or, if we take Herschel's other and earlier computation, *a* Draconis at 3° 42' from the north pole was 2011 B. C. ('Life and Work,' by Smyth, Vol. iii, p. 279), making the foundation of the Great Pyramid, by this rule, seventy-one years *later* than Seyffarth's date of the establishment of the Hebrews in Goshen. Adopting Professor Smyth's favorite method of compromise between different computations of the same thing, the happy mean between the two astronomical dates suits my theory of the foundation of the Great Pyramid by Joseph almost exactly.



Those who believe, with Professor Smyth, that the time of the Israelites in Egypt was near the beginning of the nineteenth dynasty, and that they were driven out of Egypt in about 1542 B. C., say that the Pharaohs of that day were a later dynasty of shepherd kings, of whom Sesostriis was the greatest. Seyffarth, on the contrary, says that the time of the Israelites in Egypt was that of the shepherd kings of Manetho, who, by common consent, were of the fourth dynasty; and he says that these shepherd kings were the Hebrews themselves. I see, too, that Mr. F. Cope Whitehouse, A. M., in his very learned paper entitled, "Where is the Land of Goshen?" identifies Joseph with the shepherd Philiton, the builder of the Pyramid of Cheops (p. 360), and identifies the Israelites in

Egypt with the Hyksos, the shepherd kings of Manetho, of whom he says that they "gained over nature and the Egyptians the peaceful conquest due to their superior ability" (p. 364). I must say, however, that the Bible, our highest authority on this subject, though it clearly describes a sort of peaceful conquest by Joseph over the Egyptians, in the inspiration and providence whereby he converted king and people from idolatry to the worship and service of the true God, and whereby he became the appointed and acknowledged ruler over all the land of Egypt, does not warrant us in regarding him and his brethren as shepherd kings, but, on the contrary, distinguishes between the prime ministry of Joseph and the sovereignty of the Pharaoh in the words of the latter, "only in the throne will I be greater than thou." It tells us, too, not that the Israelites were the shepherd Pharaohs at the time of the exodus, but that they were bond-servants to the Egyptians, and had been such for over a hundred years. According to Moses, the shepherd kings were the Pharaohs, and the Israelite shepherds were at first highly honored by them, not only because of the exalted character and position of their brother Joseph, but also because of their long line of shepherd ancestry and because of their preëminent qualification for the care of the Pharaohs' cattle.

Against this last sentence I see a whole host of people rising up and exclaiming: "Every shepherd an abomination to the Egyptians!" Well, I say so too, but "an abomination" in a sense that constituted an all-powerful argument with the Pharaoh in favor of his granting to Jacob and his sons "the best of the land of Egypt" for their residence and for the pasturage of their cattle, where Joseph could conveniently "nourish his father and his brethren with bread, as a little child is nourished," during the famine, and where he could make the "men of activity among them rulers over the cattle" of the Pharaoh. If the shepherd Israelites had been "an abomination to the Egyptians" in the sense of "something detestable, hateful, wicked or shamefully vile," they would have been banished from the land of Egypt altogether, or else consigned to the very worst part of it, *i. e.*, to "the Wadi Tumilat," where the Canon Rawlinson places them, and of which he says that it "offers but a

thin thread of verdure along the line of the fresh water canal." On account of the supposed odium of shepherds in the eyes of the Egyptians, most commentators banish them to the same outlandish and uninhabited region. As a fair specimen of the common opinion on this subject, I may quote from Mrs. A. M. Searles' translation of M. Lecointre's "Campaign of Moses," in the last number of this Magazine: "One of the reasons why Joseph had placed his father in this land was the hatred the Egyptians felt toward shepherds. There were then no Egyptians in the land of Goshen; consequently it was not, properly speaking, in Egypt. This explains why it is said in Genesis: 'Israel dwelt in Egypt, that is, in the land of Goshen.' Really the ancient limitation of Egypt was the river Nile, which separated it from Arabia; thus the Septuagint says, *Goshen in Arabia*. This circumstance explains very clearly the facility with which the Israelites were installed in their new homes. Really the country, not being protected by the Nile against the invasion of robbers, could not have permanent homes, and was only suitable for nomadic tribes. Therefore the small tribe of Jacob, composed of not more than four or five hundred persons, and several thousand head of cattle, had only to erect their tents, with the permission of Pharaoh, in some unoccupied district, and to send their flocks to graze in the green pastures of the Nile, to find themselves regularly established there."

What a commentary this on the loving and all-powerful provision made by Joseph for the comfort and welfare of his father and brethren; on the message sent by him, with the conveyances, to his father: "God hath made me lord of all Egypt: come down unto me, tarry not: and thou shalt dwell in the land of Goshen, and thou shalt be near unto me, thou and thy children, and thy children's children, and thy flocks, and thy herds, and all that thou hast. And there I will nourish thee, for yet there are five years of famine; lest thou and thy household, and all that thou hast, come to poverty!" What a commentary, too, on the words of Pharaoh to Joseph: "The land of Egypt is before thee: in the best of the land make thy father and brethren to dwell; in the land of Goshen let them

dwel: and if thou knowest any men of activity among them, then make them rulers over my cattle!"

Mr. F. Cope Whitehouse brings abundant proof to show that the land of Goshen, or of Rameses, the very best part of the land of Egypt, and therefore the best populated, was the Fayoum, the Arsinoite Nome, where Joseph's canal (the Bahr-Jousuf) is likely to have been in progress of construction at the time of his settlement of his father and brethren there, and where the Pharaoh is most likely to have kept his cattle. To this highly-favored spot, a little to the southwest of the royal residence, Joseph's father and brethren were assigned because of the fact that "every shepherd was an abomination to the Egyptians," to the shepherd Pharaoh no less than to any of the rest of them. This reason for such great partiality in the bestowment of favors ought long ago to have suggested the probability that the word "abomination" had anciently a meaning the very reverse of that which now attaches to it. To harmonize with the plain facts in the case, the reason in question is simply this: "For every shepherd is a pastor, a reverend, a dominie, a sacred personage, in the eyes of the Egyptians." That such was the meaning of the word "abomination" in good old Anglo-Saxon, probably at the time of King James' translation of the Hebrew Scriptures, and possibly inherited from the idolatrously-inclined Israelites in Egypt and Canaan, is evident from Webster's "obsolete" definition of the word "abominable." For this he gives us "excellent, superior, excessive;" and his first illustration is from Webster in 1607: "Fare! by Sesu (Jesu)! O, there is most *abominable* seer (cheer)." The next is an indicated passage by G. P. Marsh: "Juliana Berners, lady prioress of the nunnery of Sopwell in the fifteenth century, informs us that, in her time, 'a *bomynable* syght of monkes' was elegant English for 'a large company of friars.'" These fifteenth and seventeenth century meanings of the word "abominable" are in perfect agreement with the motive ascribed to the Pharaoh for assigning the father and brethren of Joseph to "the best of the land of Egypt," namely, "every shepherd an abomination to the Egyptians." In the light of this explanation, we see the significance of the ques-

tion of Moses to the Pharaoh of the hard heart: "Shall we sacrifice the abomination of the Egyptians before their eyes, and will they not stone us?" (Ex. viii, 26) for what the Israelites proposed to sacrifice was cattle (Ex. x, 25, 26); and cattle were sacred to the Egyptians, because of their symbolization of Osiris by the sacred bull. So, too, the designation of "Ashtoreth" as "the abomination of the Zidonians" means simply that she was the special object of their reverence and worship; and it is easy to see how an abomination in this sense to an idolatrous people became an abomination in an opposition sense to the worshipers of Jehovah. The same principle applies to all the "abominations" mentioned in the Bible.

Now, from a consistent and common-sense understanding of the Mosaic record, it is clear that the shepherd kings of the time of the Israelites in Egypt were not the Israelites themselves, but the Pharaohs; and the question arises: Does the Bible give any intimation as to whence they came and whither they went? I think it does. Near the end of the fourth chapter of 1st Chronicles we read that certain princely families of the tribe of Simeon "went to the entrance of Gedor, even unto the east side of the valley (of the Jordan), to seek pasturage for their flocks. And they found fat pasture and good, and the land was wide, and quiet and peaceable; for they of Ham had dwelt there of old." What "they of Ham" if not they with whom these Simeonite shepherds had been so well acquainted in Egypt? *i. e.*, they of the fourth dynasty of shepherd kings, previous to their peaceable conquest of their brother Hamites in that similar "fat pasture and good," the valley of the Nile? Then as to whither they went when the Mizraimites reasserted their own rightful sovereignty and expelled them as foreign intruders? In Amos ix, 17, we read: "Are ye not as children of the Cushites unto me, O children of Israel? saith Jehovah. Have not I brought up Israel out of the land of Mizraim? and the Philistines from Caphtor? and the Syrians from Kir?" That is to say, in respect to the latter, "Have not I brought up the founders of Baal-Bek, the City of the Sun in Coele-Syria, out of Kir-Heres, the City of the Sun in Egypt?"



The fourth dynasty came to an end and disappeared from Egypt during the forty years' wandering of the Israelites in the wilderness ; and its last Pharaoh, whom I take to have been the builder of the pyramid of Abu-Roash, is most likely to have led his people forth and to their final resting place by the isthmus of Suez and along the coast of the Mediterranean sea, transferring the name of Aven, and the pastoral life associated with it, from the valley of the Nile to the valley of the Orontes.

J. W. REDFIELD.

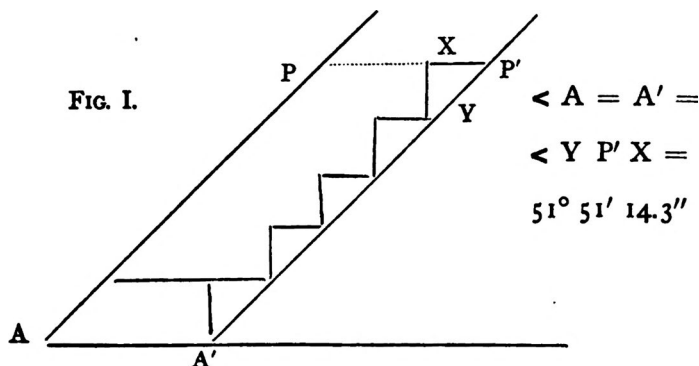


## THE CORE MASONRY AND THE GREAT WEEK OF PROPHECY—2,520 YEARS.

In the January number of *THE STANDARD*, at the top of page 639, will be found the following valuable extract from a work by the Rev. Alexander Mackay: "(B.) . . . The blocks of the core of the structure were set off, accurately in the long run, to the *same slope* as the batter of the finished casing was to be. It appears to me, that this proposition, if proved, will put an end to disputes regarding the length and height of the present masonry, and will enable us to test the much vaunted measures of Mr. W. Flinders Petrie. Even he must admit that *some law* regulated the positions of the courses. Otherwise, why are they of uniform height throughout each course, and why (as pointed out by Petrie himself, in his 168th paragraph, on page 212), are there on the "core . . . lines drawn on the horizontal surfaces, showing where each stone was to be placed on those below it?" Evidently there was no haphazard work.

PROOF No. I. The law indicated above is proved by the observations recorded in 'Life and Work,' at pages 299 and 165. First (page 299) we have the angular measurements of Mr. F. Ayrton; these, although evidently not very accurate, gave  $41^{\circ} 40' 13''$  as a mean value of the angle of rise measured at the corners. Then (page 165) Professor Piazzi Smyth measured the angle of rise of the present faces. The angles observed ranged between  $51^{\circ} 39'$  and  $51^{\circ} 59'$ ; the mean for the four faces was  $51^{\circ} 48'$ . If we compare these angles with the  $41^{\circ} 59' 18.7''$  for the arris, and  $51^{\circ} 51' 14.3''$  for the side of the building when enveloped in its casingstones, making due allowances for the weathering of the sides and the great hindrances which render accurate observation a practical impossibility, it will, I think, be evident that, if we *cut off the sharp corners* of the present courses, the building will be precisely *similar* to the

original Pyramid. Then, as regards orientation, Professor Piazzī Smyth and Mr. Petrie made several observations of the azimuths of the casing-sides, core and passages; the angles obtained were respectively  $3' 43''$  to  $4'$ ,  $5' 16'' \pm 10''$ , and  $4' 27''$  to  $5' 42''$ . If the dilapidated state of the building, etc., be taken into consideration, it will hardly be denied that these angles are practically equal, the differences being in great part attributable to errors of measurement under such difficult circumstances. So we may advance further and assert that the present masonry, minus its sharp corners, is *not only similar* to the original building, but *similarly placed* as represented in Figure I:

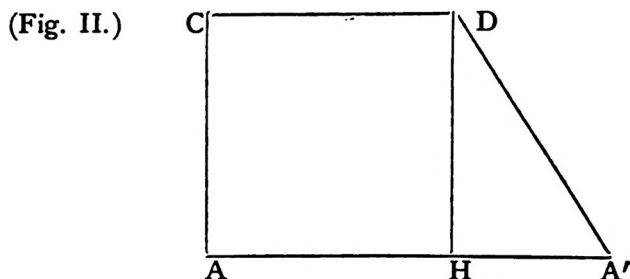


From this it follows—and particular attention should be paid to this point as it will be required further on—that *distance at any point*  $PP' = AA' = \text{base of lowest casing stone}$ . Then  $XP' = XY \times \cot X P' Y = XY \cot 51^{\circ} 51' 14.3'' = XY \times \frac{\pi}{4}$ .  
 Or sharp corner of course cut off = height of course  $\times \frac{\pi}{4}$

If the above proportion be true, then in order to ascertain the length of the present base, all that is necessary is to find the length  $AA'$  of the base of the lowest casingstone.

Now on page 25 of 'Our Inheritance' (4th ed.) are these golden words: "Two original casingstones uncovered by Colonel H. Vyse in 1837, and *proved* by him to have been the *very beginning* of the northern sloping side." Moreover, according to both Vyse and Petrie, these stones are immediately touching

the core as represented in Fig. I. In Fig. II is represented one of these casing stones.  $\angle A' = 51^\circ 51' 14.3''$ .



$AA' = AH + HA' = CD + DH \times \cot. \angle A' = CD + DH \times \pi$ .  $CD =$  (according to H. Vyse)  $51\frac{1}{2} \pm$  (See *Standard* for November 1884, on page 531).  $CD$  (minimum) according to Petrie  $= 62 - 8 = 54$ . From page 26 of 'Our Inheritance' I find, that, according to Vyse,  $DH = 60 \pm$  while Petrie's value is 58.85.

	Vyse.	Petrie.	Mean.
So $A'H = DH \times \frac{\pi}{4} =$	47. 12 $\pm$	46. 22	46. 67 $\pm$
$AH = CD =$	51. $\pm$	54.	52. 5 $\pm$
$AA' =$	98. 12 $\pm$	100. 22	99. 17 $\pm$

As Petrie gives (108—8) as a minimum value of  $AA'$  we may take mean value of Vyse and Petrie as 99. Therefore present base  $= 9140 - 2 \times 99 = 8942 \pm$  (British inches.)

PROOF No. II. This result agrees very fairly with the 8949.6 of Mr. Jomard as in a smaller measure, viz., that of the height, he estimated the probable limit of his error at 8 inches. At first sight, however, it appears quite irreconcilable with the 9001.5 of Petrie. But we must take along with this his remarkable theory of the curvature of the masonry. This would reduce the breadth *under the centre* to (*vide* pp. 43-4 of his book)  $9001.5 - 2 + 37 = 8927.5$  and under the passages, which are

about 300 inches from the centre, the breadth would be roughly,  $8932 \pm$

So we have base side                      Vyse, 8952.              Petrie, 8932.

Mean = 8942.

We have thus, by two independent methods, obtained 8,942 as the most probable length of the base. As the casingstone length can hardly be much less than 99, the value obtained by the first method is a maximum value, whilst the length found by the second method must, if compared with the measures of Davison, H. Vyse and M. Jomard be held to be a minimum. So the base side cannot be greater than, and can hardly be less than, 8,942 British inches.

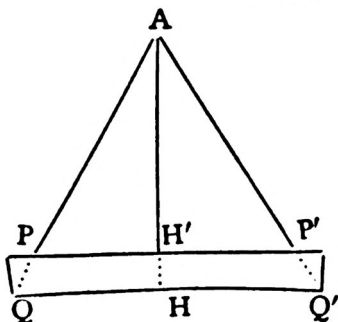
PROOF III. If our theory be correct—

Height : base ::  $1 : \frac{\pi}{2}$

$$\text{Or height} = \frac{\text{base}}{\frac{\pi}{2}} = \frac{8942}{\frac{\pi}{2}} = 5692.6.$$

We shall now see whether this agrees with the best measures of the height:

Petrie has fortunately measured the sides of the platform. He asserts that it is not an exact square; but along with this must be taken his assertion that the S.W. corner is higher than the N.E. by 1.3 inches. Certainly his values of the sides of the base, given at top of p. 38, are practically equal:



(FIGURE III.)

A = apex of present masonry if continued  
PP' = platform side.  
QQ' = bottom of 202nd course of masonry.

According to Petrie (p. 43) PP' is something between 432.5

and 438.7. The angles at Q and Q' are equal to  $51^{\circ} 51' 14.3''$ .  
Height AH : base QQ' ::  $1 : \frac{\pi}{2}$ , and QQ' = PP'.

Therefore AH =

$$\left. \begin{array}{l} \text{Minimum } \frac{432.5}{\frac{\pi}{2}} = 275.3 \\ \text{and} \\ \text{Maximum } \frac{438.7}{\frac{\pi}{2}} = 279.3 \end{array} \right\}$$

Now according to Le Pere and Coutelle the height of H', the top of the platform, above the pavement is 5,435 British inches, while the mean value of the same height calculated by Professor Piazzi Smyth from a large number of measures including his own, was 5,440. Deducting from these HH' (= height of 202nd course = 22) we obtain for values of the height of QQ' above the Pavement 5,413 and 5,418. Combining these with maximum and minimum values of AH, calculated above from Petrie's date, we have :

	Le Pere and Coutelle.	Mean (Piazzi Smyth)	Le Pere and Coutelle	Mean (Piazzi Smyth)
Height of H above Pavement .....	5,413.	5,418.	5,413.	5,418.
Height { Minimum .....	275.3	275.3	.....	.....
A H { Maximum .....	.....	.....	279.3	279.3
Height of apex above pavement =	5,688.3	5,693.2	5,692.3	5,697.3

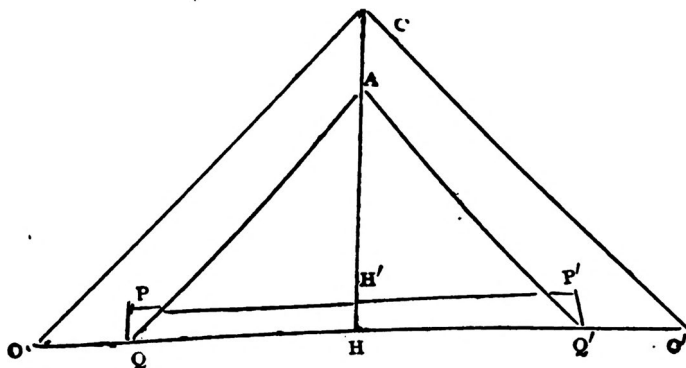
Mean of these four values, = 5,692.8

Height already calculated from  $\pi$  angle, = 5,692.6

Mean, - - - - - 5,692.7

PROOF IV.—Let A, as before, represent the apex of the present masonry continued, and PP' and QQ', the top and bottom of the 202nd course. Also (Fig. 4) let C, CO and CO' represent the apex and sides of the ancient building when enveloped in its casing stones. Then, according to our theory, O Q = O' Q' = base of lowest casing stone = 99.

FIGURE IV.



The height of C above the pavement is known to have been 5818.8 British inches. Therefore,

Height of C above pavement	=	5818.8	5818.8
Height of H { Le Pere & Coutelle	=	5413.	
above pavement { Mean (Piazzi Smyth)	=		5418.

Vertical interval C H	=	405.8	400.8
Mean = 403.3.			

$$OO' = CH. \frac{\pi}{2} = 403.3 \times \frac{\pi}{2} = 633.5$$

Petrie's two values of  $PP' (= QQ')$  are 432.5 and 438.7, so we may take for a *rough* value the mean of these two.

So $QQ'$	=	435.6 ±
$OO' - QQ' = 2 \times OQ$	=	197.9 ±
or $OQ$	=	98.95 ±
By theory	=	99. }

PROOF V.—I shall now proceed to show that the dimensions we have just obtained were exactly those needed to bring the Pyramid into agreement with the Scriptures of the prophets. I assume that the plan of the ancient building was that exhibited in Plate XXII., Fig. 2 of 'Our Inheritance' (4th ed.)

But this is open to the serious objection that a square, equal in area to the vertical meridian section of the original building, would have a side of 5151.65, whilst the periods of prophecy demand a square with a side of  $2 \times 2520$ . In the grand gallery a height of  $\frac{2520}{8}$  has been found.

I therefore ask: What should be the dimensions of a pyramid with a  $\pi$  angle of rise, in order that a square equal in area to its meridian vertical centre section should have a side of 5040?

Let  $b$  = base of the Pyramid and  $h$  = height.

$$\text{Then } h = \frac{b}{\frac{\pi}{2}} \text{ and } \frac{hb}{2} = \frac{b^2}{\pi} = (5040)^2$$

$$\left\{ \begin{array}{ll} \text{Or, } b = 5040\sqrt{\pi} & = 8933.17 \text{ (Pyramid inches).} \\ & = 8942.1 \text{ (British inches).} \\ \text{And base obtained by} & \\ \text{foregoing methods} & = 8942.0 \end{array} \right.$$

$$\left\{ \begin{array}{ll} \text{Height} = \frac{2 \times 5040}{\sqrt{\pi}} & = 5687.03 \text{ (Pyramid inches).} \\ & = 5592.717 \text{ (British inches).} \\ \text{Mean values obtained} & \\ \text{from measures} & = 5692.7. \text{ (See Proof III).} \end{array} \right.$$

I have now merely a word to add in regard to Mr. W. Flinders Petrie's measures: In the foregoing I have proved by five independent methods, that the height of the platform is not less than 5435 inches, and probably somewhat nearer to 5440 than that quantity. Now Petrie's *maximum* value of that height is only 5409.2. So we see (1st) that he erred in selecting a distance plane higher by 20 inches than that chosen by Prof. Piazz Smyth, and (2nd) that, even after allowing for those 20 inches, there remains an error of 5.8 to 10.8 inches.

Then his mean value of the base side is 9001.5. To this, with a  $\pi$  angle of rise would correspond a height of 5730.5.

Now according to him:

	At N. E.	At S. W.
Height of botton of 202nd course,	5385.7	5386.8
Values of vertical interval A H, calculated from his data, ( <i>Vide</i> Fig. III),	279.3	275.3
Total height of apex A, (Fig. III),	5665.0	5662.1

So, whilst the heights *measured* by him are from 27.7 to 30.6 *less* than the true height, the height calculated from the base side is 37.8 *greater* than that height.

From the last paragraph of page 37 of his book we find that in measuring the base side he took "the mean optical plane which would touch the *most prominent points* of all the stones." In other words, he drew his lines through the *sharp corners* of the courses, not perceiving that such lines *must* fall *about a couple of feet outside the true ends of the base*, as will be evident from (Figure I), or from Plate IX of Petrie's book. What then becomes of his value of the curvature, deduced from a base side too large by about four feet? Then from his description of the platform on page 43, I infer that although he measured the sides several times in two successive years, he did not notice any curvature in them.

R. COURTENAY.

TANNA, Bombay Presidency, July, 1885.

## THE CAMPAIGN OF MOSES.

FROM THE FRENCH OF M. E. LECOINTRE.

BY MRS. A. M. SEARLES.

### CHAPTER III.—GEOGRAPHY OF MOSES CONTINUED. PIHAHIROTH—MIGDOL—BEELZEPHON.

The Hebrews arrived at Pihahiroth, and rested there several days before being surprised by Pharaoh's army. We find in the institution of the Passover explicit instructions as to the duration of this sojourn.

We read in chapter twelve, at verse eighteen, that this feast



lasted seven days, from the evening of the fourteenth of the month to the evening of the twenty-first, during which time they were forbidden under penalty of death, to eat of leavened bread (verses 15 to 20). The first and the last days were held particularly sacred: *Dies prima erit sancta atque sollemnis, et dies septima eadem festivitate venerabilis* (v. 16). They were obliged during these days to keep a sabbatical quiet, and to observe the Passover feast. *Nihil operis facietis in eis, exceptis his quæ ad vescendum pertinent; et observabitis azyma* (v. 17). For in that same day will I bring your army out of the land of Egypt. *In eadem ipsi die educum exercitum vestram de terra Egypta.*

To what day do these words *ipsa die* refer? Is it the first or the seventh? Grammatically and rationally speaking it is the seventh.

The motives for the veneration of the first day, as pointed out in verses thirteen and fourteen are the witness and monument of the protection, accorded to Israel, during the visitation of the exterminating angel. *Videbo sanguinem, et transibo vos nec erit in vobis plaga disperdens, quando percussero terram Egypti. Habebitis autem diem hunc in monumentum, et celebrabitis eum solemnum Domino, in generationibus vestris cultu sempiterno.* (Verses 13 and 14.)

As to the seventh day the motive for holding it particularly sacred is that it was the day on which the Lord led them from the land of Egypt, as quoted before.

Many claim that *ipsa die* points to the day on which Pharoah permitted them to depart. I cannot conceive whence they draw these conclusions; but it is quite certain that it was *not* on *that* day that the Lord led them forth out of Egypt, but on the contrary, it *was* the day on which the people assembled at Succoth, in the land of Egypt.

From there the time was employed as follows: The morning of the fifteenth they left their houses, situated in Rameses (the land, not the city); in the evening they arrived at Succoth; the sixteenth at Etham; the seventeenth at Pihahiroth; and the morning of the twenty-first (*Jamque advenerat vigilia mati-*

tuna, xiv, 24) they went out of the Red Sea and the land of Egypt into the desert of Sin, or Etham.

The absolute interdiction of heaven during the seven days of the Passover (xiii., 7, 8) shows clearly that up to the time of their exit from the Red Sea the Hebrews had only eaten the cakes of unleavened bread of which they had borne the dough upon their shoulders, and which they had baked at Succoth. This shows us that they started with a sufficient supply to last them seven days.

The order given by the Lord at Etham points out in these words the position of the Hebrew encampment after the change. *Loquere filius Israel; reversi castrametentur e regione Phihahiroth, quae est inter Magdalum et mare contra Beelsephon; in conspectu ejus castra ponetis super mare* (Ex. xiv., 2).

Numbers conveys the same idea, but with some variations of expression. *Inde egressi venerunt contra Phihahiroth quae respicit Beelsephon, et castra mutati ante Magdalum.* (Num. xxxiii., 7.) The Lord further gives an idea of what Pharaoh will think of the situation of the Hebrews. "*Dicturus estque Pharao super filiis Israel, coarctati sunt in terra, conclusit eos desertum.* (Ex. xiv., 3)"

The following describes the position of the Egyptian army when it surprised the Israelites. *Cumque persequerentur Egyptii vestigia praecedentium, repperunt eos in castris super mare; omnis equitatus et currus Pharaonis et universus exercitus erant in Pihahiroth contra Beelsephon. Cumque appropinquasset Pharao, levantes filii Israel oculos, viderunt Egyptios post se et timuerunt valde. Clameverunt que ad Dominum.* (Ex. xiv-9 and 10.)

Finally the Israelites pass the Red sea. *Profectique de Pihahiroth transierunt per medium mare in solitudinem.* (Num. xxxiii., 8.)

*Ambulaveruntque tribus diebus per solitudinem, et non inveniebant aquam.* (Ex. xv., 22.)

It is evident that the change of camp placed the Hebrews in a difficult position, for when Pharaoh learned that they were at Pihahiroth he cried: "*Coarctati sunt,*" etc. "They are entangled in the land and the wilderness hath shut them in." (Ex. xiv., 3.) Seeing no way for their escape he determined to sur-

prise them. The Lord hardened his heart and he put his army in pursuit of them.

But this land which entangled them, this wilderness which shut them in, must present themselves to us in the form of mountains, else they could not have hindered their flight. Really, "the proper translation of the Hebrew term 'Midde-bar' is mountain, although it is ordinarily translated by wilderness." (Dom Calmet.) It is evident, then, that flight was impossible, and as Moses shows them to us between Migdol and the sea, it follows that Migdol, that is, the mountain, is the obstacle which shuts them in.

On account of etymological reasons Mons. Abbe Vigouroux does not admit that this conclusion is correct. He says: "The word Migdol is found in the Egyptian inscriptions under the form *Malik*; it means fortress, and proves that Migdol must have been situated on the frontier, between Egypt and the desert." And in another place he says: "Migdol cannot mean a mountain, but a strong place."

If the etymology was certainly exact, this would not prove his theory. Even though the word Migdol signified a fortress, it might, nevertheless, also designate a mountain, as St. Bernard, The Table, and others; and the fortress need not necessarily be placed upon the frontier: witness Vincennes, le Mont Valerien, etc.

He says further: "We must not put too much stress upon the word *coarctati*, because *neboukim*, the corresponding word in the original simply means 'muddled, led astray, lost.'" But then it would be necessary to translate the passage, *Coarctati sunt in terra*, by "They are lost in the land," which would be contrary to sense, for they are not lost in any sense of the word, and know very well that they are between Migdol and the sea, opposite Beelzephon; or else we must say they are muddled or troubled in the land, which would be nonsense, for there was no reason why they should be troubled there more than elsewhere. The word *neboukim* then has, necessarily, another sense, and the one pointed out by St. Jerome is as reasonable as it is satisfactory.

We see that if the Hebrews are surrounded by mountains

and deserts, that is not to say that they themselves were in the desert. This is proved by the text: *Profectique de Pihahiroth, transierunt . . . in solitudinem*: "Having departed from Pihahiroth they went into the desert;" they were not in the desert then when they were at Pihahiroth.

Really they rested there three days, and must have found water there, since they had no lack of it until after they had crossed the Red sea; whence we must conclude that a canal, (no doubt derived from that at Etham) or perhaps several branches came thus far, but stopped at the western shore of the Red sea.

For, to satisfy the thirst of so great a multitude the springs were insufficient. Not only because of the great quantity of water required, but still more because being confined in narrow limits, it was not accessible by so great a multitude; a little calculation will give us an idea of the operation.

Estimating at three millions the number of men and beasts to be supplied, at the same rate that is allowed to sailors, both for cooking and drinking, viz.: one and three-quarters pints each, the Israelites drank daily the contents of a canal 3.3 feet deep, 6.5 feet wide and 14,764 feet long. If we suppose these drinkers to be ranged upon two banks, each one occupying 19.5 inches of space, and allowing each one two minutes to take position, drink and go away, the operation would occupy five and one-half hours. Thus we see it was no small thing to satisfy the thirst of the Israelites.

The texts that we have cited do not employ exactly the same language to express the same thing. In searching for their points of harmony we gain much additional instruction.

Let us first of all examine minutely the meaning of the prepositions, *e*, *contra*, *ante*, *in*, which determine the position of the different objects in question. *E* or *Ex* indicates separation, remoteness, and signifies far from, outside of, above or below; and we translate *e regione Pihahiroth* by "down below Pihahiroth," for we see the Egyptians in Pihahiroth occupy quite an elevated position; since it is in lifting the eyes—*levantes oculos*—that the Israelites perceive them. *Contra*, in speaking of place, means opposite, on the other side, opposed to or

facing. *Ante*, by, before, in front of, in advance, in presence of. *In*, by, in or upon.

These prepositions can only be applied to those objects which present at least one front, or in a word a predominant dimension which fixes the attention, as, in a street of which the houses are exactly opposite. Evidently they are looking each other squarely in the face. The point in question would demand above all that the façades be parallel, then that the dividing walls coincide. In any other case they are more or less oblique, each in relation to the other. An object on the façade as a gas lamp, will be opposite a house when a perpendicular line drawn through that object shall be opposite the centre of the house. But if the point in question were two lamp posts, this reasoning would not hold good in the same sense. For we should be obliged to introduce a predominating dimension ; for example, the direction of the street in which they are placed ; then they will be opposite each other according as the line that connects them be parallel or perpendicular to that direction.

For the camp of Israel the dimension or predominating direction is evidently the line of the bank or shore. Now as Exodus indicates it by *super mare* and Numbers by *ante Magdalum*, it must be (to identify these accounts as having reference to the same thing) that Migdol extends along the shore and parallel to it ; then it is a chain and not an isolated mountain. We see very plainly the camp upon the shore, between the mountain and the sea ; but in which part of the shore ? At the beginning, in the centre, or at the end ? A landmark is necessary which will determine the sense. There is one : it is Beelzephon.

This is in fact what God had said to Moses : *In conspectu ejus (Beelzephon) castra ponetis super mare*. You shall place the camp opposite to Beelzephon, on the sea shore — *e regione Pihahiroth, contra Beelzephon* ; at the foot of that part of Pihahiroth which is opposite to Beelzephon — *Quae respicit Beelzephon* ;" which looks at Beelzephon.

Pihahiroth—what is it ? Moses tell us it is situated between Migdol and the sea : *Pihahiroth quae est inter Magdalum et mare* ;—then it is the plain that descends from the mountain

chain to the sea; or rather the high part of that plain where are situated the passes through which the Egyptians defiled to their camp on the heights, which are in Pihahiroth; *omnis equitatus et currus Pharaonis et universus exercitus erant in Pihahiroth*; while the Hebrews on the shore were opposite Pihahiroth—*contra Phi.* . . . at the base of a certain part of Pihahiroth, *e regione Phi.* . . . that part which is opposite Beelzephon, *contra Beelzephon*, which looks upon Beelzephon, *quae respicit Beelzephon*. It is there that taken by surprise, they learned, in lifting up their eyes, that they have the Egyptians in their rear; *levantes filii Israel oculos, viderunt Egyptios post se*.

It was at Etham that Moses spoke to the people to designate the next camping ground, upon the shore in front of Beelzephon, an indication that, to be understood, it was necessary that the people should be acquainted with Beelzephon. This certainly could not have been the case with the most of them; they must then have been able to perceive it from the place where they were assembled; and as it was distant a day's journey, (about six or seven leagues), it could only have been some mountain whose peak was easily distinguished. We notice still farther, that the camp was placed at the foot of that part of Pihahiroth which overlooked Beelzephon, that part being necessarily along Beelzephon itself; that length must have been such as would accomodate so large an army; this could only be the case with a mountain of a certain importance, and not with an object of limited dimensions, as a tower, a fortress or some such edifice.

All the action took place upon the Egyptian bank; it is there, then, that the chain of Migdol is situated, that which, parallel to the Red sea, trends north and south; and Beelzephon, which, as we now see, forms a part of it; for it could not have been outside of it. Above all it cannot be between the chain and the sea, that is to say to the east of the chain, for then it would be *in* Pihahiroth which is between Migdol and the sea; and we should not be able to satisfy all the conditions of the seat of the camp. In fact if we put the camp at the foot of Beelzephon, by the side of the sea, it will no longer be *before* Migdol, as

Numbers tells us; and if we place it at the foot of Beelzephon by the side of the chain, it will no longer be upon the border of the sea, as Exodus puts it. Neither can we place Beelzephon on the other side, that is to say to the west of the chain; for in that case Pihahiroth, which ought to be between Migdol and the sea, would in fact look upon Migdol on the one side, and upon the sea on the other, but in this case we could not satisfy this text in Numbers, *Pihahiroth quae respicit Beelzephon*.

We cannot then place Beelzephon either to the north or to the south, or in the chain of Migdol. But the Hebrews were camped at that time in front of Migdol, *ante Magdalum* (Num.), and before Beelzephon, *contra Beelzephon—in conspectu ejus* (Ex.), and in order to satisfy this double condition Beelzephon must be in the chain itself, that is to say, it must make a part of it.

These different texts, instead of contradicting each other, combine to define the position of the camp: It extended north and south along the shore of the Red sea in front of the range of Migdol, opposite one of the principal mountains named Beelzephon.

The part of the plain of Pihahiroth by which the Hebrews had marched from Etham to reach their camp, was the only part supplied with water, from thence it was desert, *conclusit eos desertum*. The canal which conducted the water could then go no farther, so that the Egyptians were able to double it with their chariots, in the same manner as the Israelites on arriving at the entrance to the desert some days before, had doubled that at Etham. The Israelites were surprised by the Egyptians and only perceived them when they had come very near, *cumque appropinquasset Pharaon*. They had not then marched by the open plain, but came from behind the mountains, which implies the existence of defiles practicable for chariots. They came out in the rear of the Hebrews, *viderunt Egyptios post se*; that is to say, from before Beelzephon, *erant in Pihahiroth, contra Beelzephon*.

All of the conclusions of this investigation are exactly in accord with the information of the Talmud, the only source of

instruction, which, outside of the Bible, can present any authority. I quote from Pere Sicard: "The Talmud makes of Mount Migdol and Mount Beelzephon a single continuous and uninterrupted mountain. It adds that this mountain has two entrances. That they were worshiped by the Egyptians, and that there were oracles there; that these two passes were Pi-hahiroth, and that the mountain opened suddenly to give a passage to their fathers," evidently meaning the fathers of the Egyptians. This agrees with our interpretation, with this additional particular, that Pharaoh came by two passes or defiles; whence we learn that perhaps Beelzephon turned two ways to the north and to the south.

The chariots in their passage encountered no obstacle, neither in the plain, nor in the sea, *via sine impedimento*. This shows that the passage was free and that the incline was gentle and continuous. But having arrived in the midst of the sea, the wheels dragged, the chariots sank and disappeared in the depths; while the men, frightened, leaped down and fled. But Moses extended his hand over the water which came again and engulfed them.

The disappearance of the chariots in the depths, *in profundum*, before the return of the waters, evidently signifies that they were swallowed by the soft ground of the sea bottom, which yielded under their weight, *devoravit eos terra*. "The earth has devoured them," says the song of thankfulness sung by the Israelites.

This ground could only have been the soft mud and slime, or moving sand of the sea bottom. We know by Habakkuk that it was soft mud, *viam fecistis in mare equis tuis, in luto aquarum multarum*: "You have made a road for your horses in the sea, upon the mire of the deep waters." (Hab., iii., 15.) According to the Saga the surface appeared like any land and was covered with sea-wreck. *Ex aqua quae ante erat, terra arida apparuit, et in mare Rubro, via sine impedimento, et campus germinans de profundo nimio*. "There where had previously been only water, appeared dry land, in the Red Sea a way without obstacle, and in the great depths a field covered with vegetation." (xix., 7.) [TO BE CONTINUED.]



## THE DISTANCES AND DIAMETERS OF THE SUN AND MOON.

The May, 1885, number of the "Monthly Notices of the Royal Astronomical Society" contains a paper by Mr. W. G. Thackeray, of the Royal Observatory, Greenwich, in which he gives the results of a discussion of the observations of the apparent diameter of the sun during the years 1861-1883, and those of the apparent diameter of the moon during the years 1856-1883. The final results at which he arrived are:

Mean apparent diameter of the sun =  $32' 2.50''$ .

Mean apparent diameter of the moon =  $31' 8.20''$ .

Adopting Adams' value of the moon's mean equatorial horizontal parallax,  $57' 2.31''$ , and the equatorial diameter of the earth to which I was led from Pyramid data some time ago, 7918.0138 Pyramid miles, the above apparent diameter gives the actual diameter of the moon = 2161.275 Pyramid miles. It is evident, therefore, that the diameter I had obtained and given in a communication in the *Banner of Israel*, of August 31, 1881, 2157.2 Pyramid miles, is incorrect, and that the equations from which it had been derived must be modified or discarded altogether. I have, however, for some time had reason to doubt whether equations derived directly from Pyramid measures could be relied upon, and have especially doubted whether we were justified in assuming that the distance of the sun was correctly represented by the height of the Pyramid and the 9 : 10 theory, and whether the sun and moon distances and diameters could not be more correctly derived from important earth measures. The most important of the earth measures after the polar and equatorial diameters would, I assumed, be the coördinates of position of Jerusalem and the Great Pyramid referred to the earth's centre. Proceeding then to test this view, and commencing with the position of Jerusalem, I at once obtained the following remarkable result:

The diameter of the earth in the latitude of Jerusalem multiplied by the sidereal period of the moon in mean solar days, and divided by 100 = 2161.3285 Pyramid miles which differs from the above astronomical determination of the moon's diameter by only 0.0535 of a mile, which is well within the limits of the probable error of this determination.

For the distance of the moon I found that the diameter of the earth in the latitude of Jerusalem multiplied by the cube root of four times the diameter of the circle of latitude of the Pyramid = 238,652.0 Pyramid miles. With this distance and the diameter = 2161.3285 Pyramid miles, the mean apparent semidiameter =  $15' 34.0''$ , which is also well within the limits of the probable error of the mean semidiameter derived from the Greenwich observations ( $15' 34.1''$ )

I now proceeded to seek for an expression for the sun's distance and obtained the following:

The square of the earth's equatorial diameter multiplied by the cube root of  $\pi$  = 91,822,500 Pyramid miles. The following confirmatory expression was also obtained:

Two hundred times the diameter of the earth in the latitude of Jerusalem multiplied by the square root of the cosine of the latitude = 91,822,500 Pyramid miles.

For the diameter of the sun we have:

One hundred times the equatorial diameter of the earth multiplied by the moon's synodical period, and divided by the sidereal period expressed in mean solar days = 855,817.6 Pyramid miles.

The diameter of the sun being 855,817.6 Pyramid miles, the connection between this diameter and that of the moon is shown as follows: The square root of the sun's diameter = 100,000 times the moon's diameter divided by the product of the moon's synodical period and the diameter of the earth in the latitude in which one minute of arc of longitude exactly equals one Pyramid mile.

With distance 91,822,500 miles, and diameter 855,817.6 miles, the sun's mean apparent semidiameter =  $16' 1.23''$ ; the mean value obtained by Mr. Thackeray from the Greenwich observations is  $16' 1.25''$ .

The above value for the distance of the sun gives the parallax =  $8''.898$ , and after I had obtained it I referred to the list of astronomical determinations given by Mr. Latimer in his paper on "The Parallax of the Sun," on pages 37 and 38 of the "Proceedings of Ohio Auxiliary Society of the International Institute for Preserving and Perfecting Weights and Measures," and selecting twelve of the most reliable I found that the mean value was  $8.897''$ . I conclude, therefore, that the most probable distance of the sun is that given by the above equations.

The value of the earth's equatorial diameter which I have used in my calculations is given by the following equations in which  $t$  = the length of the tropical year,  $e$  = the earth's equatorial diameter, and  $E$  = the polar diameter :

1.  $\frac{(4 \sqrt{56 t \sqrt{2}})^2}{E} = e = 7918.0138 \text{ Pyramid miles.}$
2.  $\frac{E}{40 \sqrt[3]{\frac{2t}{\sqrt{\pi}} - 1}} = e = 7918.0138 \text{ Pyramid miles.}$

The value of  $t$  necessary to make these equations strictly identical is  $365.2424216$  ds., but this value is not the astronomical value of the length of the year at the commonly supposed date of the building of the Pyramid, nor that at the date of the birth of Christ, but is that which it had about 1700 B. C., and therefore at the time when Joseph was ruler over Egypt, thus supporting in a remarkable and very unexpected manner the view advocated by Mr. J. W. Redfield that the Great Pyramid was built under Joseph's direction.

I have elsewhere shown that in order to account for the angles of descent and ascent of the passages, and the length of the leading measures in the Great Pyramid it is not necessary to assume that they are connected with, or dependent upon, the position of the star  $\alpha$  Draconis at any particular time, and therefore the mean value of these angles, and the position of the two fine lines on the walls of the entrance passage cannot any longer be regarded as affording a reliable indication of the date of the building of the Pyramid.

JOSEPH BAXENDELL.

THE OBSERVATORY, BIRKDALE, SOUTHPORT, September 1, 1885.

## LETTERS.

## LETTER FROM H. R. SHAW.

## GRAND GALLERY LENGTHS.

DEAR SIR :—In a review of three pamphlets in the *Banner* for July 1, treating pretty much upon this subject, it is observed that previous writers have determined this length mathematically and otherwise as 1,921 inches or thereabouts—in fact, nearly agreeing with the 1,922 inches, as claimed by Mr. Keith's pamphlet. Presuming myself to be intended as the writer who gave the mathematical determination at 1,921 inches (in the *Banner* for May 2 and 9, 1883), and having also my attention privately recalled to the matter by two of the most valued contributors to these pages, I hope to be permitted to recapitulate a portion of my previous article in justice alike to myself and the Great Pyramid, and possibly to benefit and assist new inquiries in this field of research.

That article, after quoting a previous observation of Piazzi Smyth, that the grand gallery had three lengths, as given by his own measures, went on to point out still two more real and practical measurements that might be maintained, as well as a sixth length, a purely theoretical one, but which harmoniously governed the other five lengths in truly quintosextuple propriety, being in itself the curiously quintosextuple number of 1,921 inches. And the further remarkable property of the six lengths is that they yield an average which is exactly equal to one of their number, the real floor length of 1,874 inches, and thereby investing that quantity of inches or years with central significance in regard to the events of the ending of the dispensation represented by this chamber, and confirming my own previous conclusions, as set forth in the "Egyptian Enigma," page 52. Thus the lengths are :

	PYRAMID INCHES.
1.—Ascending floor line alone.....	1,813.
2.—Dr. Grant's length of roof.....	1,844.5
3.—Real floor line, all of it.....	1,874.
4.—Ascending line, all through step.....	1,881.6
5.—Line over step, $43.7^2$ , or $\frac{40000}{9}$ .....	1,910.
6.—Quintosextuple theory, $25^2 + 36^2$ .....	1,921.
	6   11,244.1
Average length.....	1,874.

Thus the Pyramid shows in a natural way, and without any alteration of the system of inch-chronology, the same quantity of 108 years, as is claimed by Mr. Keith for the closing in of the dispensation, but with the dates or intermediate endings altered to 1813, 1845, 1874, 1882, 1910 and 1921 A. D. What this may mean I do not attempt to unfold ; but if there be any meaning at all in the grand gallery's inches (as who can doubt) then the end was ushered in at the close of the year 1813, and must terminate finally at the close of the year 1921, having an important central epoch at the close of the year 1874, besides remarkable and perhaps decisive events in Israel's history, occurring in the spring of 1845 and 1882, and the close of 1910. This I believe to be the real enigma of the

grand gallery, and one to which students or expositors of the Great Pyramid and the prophetic Scriptures will do well to direct their attention.

I remain, dear sir,

Yours faithfully,

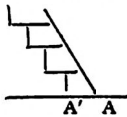
H. R. SHAW.

24 Ludgate Hill, E. C., July 3, 1885.

#### LETTER FROM R. COURTENAY.

TANNA, BOMBAY PRESIDENCY, July 20th, 1885.

*Dear Sir.*—I hope you will excuse my writing on this paper, but I wish to have it of the same size as the manuscript which I enclose. I shall esteem it a favor if you can find space for the article which I have put in a very compressed form. I think if you admit the force of my arguments, you will like my conclusion which comprises my view of the casing stones, viz: That they were only seals on the prophecy—a cover to be removed. I am greatly indebted to Mr. Skinner for his splendid criticism of Petrie's Measures in the November number of THE STANDARD, from which I have derived much information and valuable suggestions. The little figure is a tracing from the lower part



of Petrie's Fig. ix. You will see that a line drawn through the sharp corners of the masonry (*vide* his last par. on page 27—"most prominent points"), must fall between A' the true end of the present base, and A the end of the ancient base. He must have looked at the first fifty courses, the average height of which is 33 to 36 inches. Therefore (*vide* proof I, page 351, of this Magazine), his line would be thrown out  $34 \times \frac{\pi}{4} = \frac{34 \times 11}{14} = 27$ . Deducting this at each side we have for his mean value  $9001.5 - 54 = 8947.5$ .

I am still quite in the dark as to the position of the end of the basement sheet of the entrance passage. Over what course of masonry is it and about how many inches above that course and how many horizontally from the vertical face of that course? I have been under the impression that it was over the sixteenth course, in which case the height must be more than 600.

As Petrie (*vide* note to pp. 41-2) started 20 inches higher and struck off one course his 612 answers to 632, or 4 or 5 inches above the seventeenth course of Piazza Smyth. It ought to be easy to determine above which course of Piazza Smyth, and until this is done I can make no progress. I should be much obliged if you would help me in this matter.

I notice that the Institute have prepared a large chart of the Pyramid. I shall (D. V.) after the 1st prox. remit the equivalent of V. 10, and I shall be much obliged if you will send me a copy of the chart. If I send less than the price let me know, and if more, please put the balance to the credit of the Institute.

You ask me about Mr. O'Donel: I correspond regularly with him. He is very strong in Biblical chronology, and it was from him that I first heard of the tables of days of the Julian Period at the end of the Greenwich Nautical almanac. He is at present working at the chronology of the queen's chamber. I hope you will encourage him to go on with his investigation. I have not found your date in 1774, A. D.; it should be either in the queen's chamber or in the part of the gallery preceding the great steps.

I was greatly pleased by all that you told me in your letter, although I cannot adopt your views in regard to Isis. I have derived mine from Heslop's "Two Babylons," a book in which such wonderful things are asserted, that I did not believe them until I had fully tested them by means of classical dictionaries, "History from the Monuments," etc.

I see from the May number that you attach particular importance to the verification of the date of Waterloo. I think you may set your mind at rest about that date. If Mr.

Searles does attack me I am much better prepared to answer him than when I wrote my pamphlet. I send you some spare copies of the postscript. Hoping soon to hear from you, I am, yours sincerely,

R. COURTENAY.

#### LETTER FROM THOMAS BASSNETT.

MAYNOKOTA, IOWA, Aug. 7, 1885.

*Dear Sir:*—I send you by same mail a small pamphlet, which, if duly weighed, may be regarded as invalidating certain conclusions of C. P. Smyth drawn from the measures of the Great Pyramid in which you take so much interest. I believe in the Pyramid and its teachings, especially, as I find so much to confirm my own long ago obtained facts in a system of ancient chronology begun over fifty years ago, and which, (D. V.,) will ere long see the light. But I do not see in the way the sun's distance is obtained any very appropriate relationship between the indications and their interpretation; and I am afraid that the great truths which the Pyramid does undoubtedly teach, may be damaged by an excess of zeal in claiming it as a witness to belittling and irrelevant facts which never entered into the minds of its builders.

Whether the sun's distance is contained in the Pyramid or not (and this certainly would not be a fact unworthy of being recorded in such a monument), I, of course, can offer no opinions, but, if it be, depend upon it it will be found near the figures given in that pamphlet. I suppose that Prof. Encke devoted more time and talent to the question of parallax than any other man, and he gave the same parallax as mine from the mean of transits of Venus of 1761 and 1769, or the mean of  $8''.49$  and  $8''.60$ , or  $8''.545$ . I find from the law I have discovered  $8''.55$ , or more exactly  $8''.542$  corresponding to a distance of 95,693,000 miles. But you will notice I reverse matters by finding the true distance of the sun first, and then, as a matter of curiosity, calculate the corresponding parallax.

Wishing your magazine the prosperity it deserves, I remain,

Yours truly,

THOMAS BASSNETT.

#### LETTER FROM JOSEPH BAXENDELL.

THE OBSERVATORY, BIRKDALE, SOUTHPORT, Sept. 1st, 1885.

*Dear Sir:*—I enclose a short paper "On the Distances and Diameters of the Sun and Moon," for insertion in the "INTERNATIONAL STANDARD" if it meets with your approval. I was much surprised when I obtained a length for the tropical year agreeing with the length it must have had in the time of Joseph. This, taken in connection with the results I had previously obtained, and the arguments ably advanced by Dr. Redfield in his interesting papers on "The Altar and Pillar to Jehovah," seems to show that the Draconis theory of the time of the building of the Great Pyramid must now be given up. Whatever may have been the primary object of the design of the Pyramid, there can now be little doubt that the figure and dimensions of the earth were intended to be indicated by the more important of the measures of angle and length.

I regret to say that my health is in a very unsatisfactory state. I have been interrupted while writing this, and as it is now near post time I must conclude, with my kind regards to you and best wishes for the success of the "INTERNATIONAL STANDARD."

Yours very sincerely,

JOSEPH BAXENDELL.

LETTERS FROM J. M. DURKEE.

BEHOLD MELCHISEDEC !

PITTSFIELD, MASS., Aug. 28, 1885.

From the earliest history of the church, (see Heb. 5, 11,) to the present hour, to the great mass of Christ's believers, and also others, Melchisedec has been a dark, wonderful, unsolved mystery ! Even Dr. Adam Clark remarks :

"There is something certainly mysterious in the person and character of this king of Salem. He seems to have been a sort of universal priest, (!) having none superior to him in all that region; and confessedly superior to Abraham."

Many other commentators, are of like opinion; some moderns, even, surmise that he built the "Great Pyramid of Jeezeh in Egypt !" (Permit me here to remark: that may be true in many respects, but he had a wonderful sub-builder in the land of Egypt.)

It is not my design, by the multitude of quotations from others, or ideas of my own, to obscure this remarkable personage, but far otherwise, to "hearken to the voice of the word of God," and all who have "ears to hear," and "eyes to see" shall hear, and "behold Melchisedec."

1st. "Now consider how great this MAN [Melchisedec] was, unto whom even the patriarch Abraham gave the tenth of the spoils." Heb. 7, 4.

2d. "But this MAN, [Melchisedec] because he continueth ever, hath an unchangeable priesthood." Heb. 7, 24.

3d. "But this MAN, [Melchisedec] after HE had OFFERED ONE SACRIFICE for sin, FOREVER sat down on the right hand of God." Heb. 10, 12.

[This mysterious priest—this "man"—as he is called, "offered ONE sacrifice" even himself, upon Calvary, "For if he were on earth, he should not be a priest."]

4th. "Then said HE, Lo, I come to do thy will, O God." Heb. 10, 9.

5th. Then said I, Lo, I come (in the volume of the book it is written of me) to do thy will, O God." Heb. 10, 7.

Comments are entirely unnecessary. "Behold Melchisedec." Behold the "Chief Corner Stone" of the Pyramid of eternal redemption.

After the order," signifies plan and arrangement of God ! Hence the marvelous beauty of that passage: "Lo ! I come !"

Respectfully yours,

J. M. DURKEE.

LETTER FROM J. M. DURKEE.

PITTSFIELD, MASS., Aug. 21, 1885.

*My Very Dear Sir:*—I was not quite satisfied with the last letter which I wrote to you, especially that part wherein I make mention of "ascending angels" and "mysteries." I wish now to enlarge upon this thought, in as concise manner as possible, and when all the members of our Society shall behold and understand the true teachings of things invisible by things visible, then will His "Pillar" which is in Egypt appear unto us as a "pillar of fire" of Revelation, and the "ascending and descending angels" as the earthly ambassadors of that revelation.

There is no possibility of misconception in this matter, for the light of God's enunciation causes all things to flame with the presence of God as the "burning bush." I do not say one thing, but all things, and I present the following word of God as my support :

"For the INVISIBLE THINGS of Him FROM the creation of the world are CLEARLY SEEN, being understood by the THINGS THAT ARE MADE, even His eternal power and Godhead."

"Hast thou not heard LONG AGO, HOW I HAVE DONE IT?"

I will not mystify by words, but rather look "steadfastly" upon the revelation of he

invisible by the visible : yes, I will look upon His "Pillar" of "signs," and may I say, the great "treasury" of "types" of God's creation !

But another assumed mystery—"Melchisedec"—(who, some conjecture, built the Pyramid). But let us ascertain who He was, by the "visible" priest, the—"type !"

"This MAN (mark the wonderful revelation !) BECAUSE HE CONTINUETH EVER, hath an UNCHANGEABLE Priesthood," "made higher than the heavens."

"Who is made, not after THE LAW of a carnal commandment, but after the POWER OF AN ENDLESS LIFE !"

"It is therefore NECESSARY that the PATTERNS of THINGS in the heavens should be purified with these ; but the HEAVENLY THINGS themselves with BETTER SACRIFICES," "For Christ is not entered into the holy place made with hands."

Thus we behold Melchisedec—Jesus—the Priest of God !

Also further, my design is, to show that the mysterious "line of Shepherd Kings" existed only in the genealogies which God "has called from the beginning," and made us "to know" the Shepherd King Invisible, by the shepherd king visible, and the FIGURE of Him who, "in the fulness of the dispensations of times," shall "gather all things in Christ."

Forever, then, fade all mysteries by the light of eternal revelation. The "Spirit takes of the things of God, and shows them unto us."

Forever vanish shepherd kings who have no genealogies, no pastures, no wells, no springs within the valleys or upon the mountains of God !

O, Infinite ! Heavenly Father ! in the manifestation of Thy Glory, make manifest unto Thy dear children, who seek to know, and to glorify Thee upon the earth, Thy manifestations in "visible things."

Thus I feel assured that we "shall know of the doctrine," and also understand the teaching of His word by figures, symbols, allegories and parables.

Respectfully yours,

JAMES M. DURKEE.

#### LETTER FROM R. COURTENAY.

TANNA, BOMBAY PRESIDENCY, August 3, 1885.

*Dear Sir:*—Just a line to tell you that I have remitted to you through the post office £1. Will you kindly let me know whether you have received safely an article on "The Core Masonry and the Great Week of Prophecy," dispatched on 20th ult? If the article should be discussed at one of your fortnightly meetings, I would be glad if you would sum up as follows : My theory will be opposed on two grounds—1st, because my value of the *base* side is too *small* ; and (2d) because my value of the *height* is too *large*. Unless the objection can show that the angle of rise of the present masonry (minus sharp corners of courses) is *not* the  $\pi$  angle of the ancient structure, these objections are mutually destructive, so they cannot be maintained together.

(2d.) The angular observations of Ayrton and Professor Piazzi Smyth prove that the  $\pi$  angle is the angle  $51^{\circ} 51' 14.3''$ .

(3d.) If we subtract the platform side (making due allowance for corners) from the values of the base, and from the difference calculate height of platform by means of  $\pi$  angle, it will be found to correspond so closely with the best measures of the height of the platform as to leave no doubt in any unprejudiced mind that this is the true angle.

(4th.) As the present base side must be equal to the ancient base minus the casing stones, 8952 must be too large, for this would leave only 188 for the two casing-stones, and no such stone has been found with any base less than from 98 to 100.—

O'Donel sent me a number of the *Plain Dealer* with a short notice of an attack on my pamphlet by Mr. Searles. As I suppose it will appear in the July number of the STAND-



ARD, I shall reserve my answer till I see that number. I found after I had printed my pamphlet that I might have taken up a much stronger position than I did in proving that the height of the step was 840 inches.

Yours sincerely,

R. COURTENAY.

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LETTER FROM J. H. DOW.

CLEVELAND.

*Dear Sir:* If Mr. James Simpson's proposition (published in Jan. number of INTERNATIONAL STANDARD) is correct, that the sum of the square roots of length, breadth and height of king's chamber, in Pyramid inches, is fifty *exactly*, then, by admitted geometrical relations of king's chamber dimensions to base of Pyramid, the length of one side of base will be 9133.+, instead of 9131.+ (By formula,  $\frac{62500 \sqrt{\pi}}{(1+\sqrt{2}+\sqrt{\pi-2})^2} = 9133.+$ )

Will Mr. Simpson please examine this test?

Yours truly,

J. H. DOW.

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LETTER FROM JACOB M. CLARK.

119 LIBERTY STREET, NEW YORK.

*Dear Mr. Dow:* You have struck one of the grandest thoughts that has arisen in the whole investigation. You are pleased to speak of my announcement of the proposition as to gravimetric correlations in better terms, perhaps, than it really deserves. Maintaining, nevertheless, my own idea, that whatever correlated measures we may find about the Great Pyramid may be "pointers" to the ultimate scientific unit, may it not be the fact, that while it has pleased God to preserve the key of the measures among the Anglo-Saxon people, it was only a key after all?

I would like to have you suggest to Rev. Mr. Wood, and to Latimer, a point which I forgot to mention in my letter to Latimer yesterday, that Mr. Wood's differential 25 inches of the pendulum in British inches at the Pyramid, applies with mathematical exactness in Pyramid inches at latitude 45°. Now, conceding that the progenitors of the Anglo-Saxon people were represented at the building of the Pyramid, were not others also, under the correlation I have indicated? Sufficient honor, then, to the Anglo-Saxons that having preserved their ancient measures, though marred by vicious legislation, as Colonel Chester so happily puts it, they are singled out of God to be the instruments, in His providence, of pointing out the metron which was in the mind of the architect. If we take a different view, my dear Mr. Dow, the Egyptian, the Arabian, the Persian, the Hindoo, and countless others whose measures can be disclosed in the Pyramid, by application of ratio, can also, by the simple argument of analogy, claim to be the chosen people of God. God forbid. "To the Jew first, and afterward to the Gentile." Why did Ezekiel say, and repeat, "according to these measures," and "the cubit is a cubit and a hand breadth," and "the reed is a full reed of six great cubits," except on this one idea, that ultimately the ruling metron of the world (not solely of the visible temple) was to be the one metron of science? Really, is it possible, under any other theory, to unite the whole world upon one system, or rather on a simple and easily understood correlation of metrics? And when the millenium comes, Dow, will it not be the case, that the metron will be the simplest, most universal and most logical metron to be found? Where is any one that, in all its applications, can compare with the sacred cubit?

In regard to revelation, I wrote to Smyth (in effect) that the modes of revelation are as countless as the facts of the cosmos, and various as the channels of human thought;

that the world teems with men, whether of Paul, or of Cephas, or of Christ, or of neither, who see the heavens aflame with divine glory, and the firmament an illuminated scroll of His handiwork ; to such men the humblest blade of grass is a literal burning bush, before which science stands veiled and barefoot. [And the old idea pictured to us in our childhood, of Moses kneeling on Horeb, and receiving a pair of flagstones out of an irradiate, thunder cloud—as a conception of the nature of revelation—must be buried with the rest of the dolls (i—dols) of childhood]. Piazza Smyth says, in effect, amen. We are simply on our knees asking for the truth.

Truly yours,

JACOB M. CLARK.

P. S.—I wish, Mr. Dow, you would write to Rev. Edward Hine, pointing out the fact of the preservation of the fundamentals of the Anglo-Saxon weights and measures to be one important link in the identity of the race with the Pyramid builders, and with the ancient people of the covenant, no matter whether we treat of exact ultimate dimensions, or of the most significant and convergent key to be found (except possibly among the Arabians).

[Compare the masons, direct or itinerary, of the various portions of the now British people, of the Gauls, the older French, the Lithuanians, the Silesians, etc., etc., as found in the "Metric Analogues," published in the INTERNATIONAL STANDARD.]

There is but one logical and pure symbol for God—Christ—the New Jerusalem—and all that ; it is the circummetric ratio, or  $\pi$ . The equilateral triangle and the cross are emblems of it—implements of its disclosure—and yet they are not it. He alone, though finite as to any assignable predicate, is infinite in its expression. But it has only one mode of logical subdivision. The Babylonian method—a most captivating monument of human ingenuity—is artificial and therefore wrong. Its unnecessary and entangling factor,

$\frac{\pi}{6 \times 60^2}$ , is the clay with the iron, just where "the stone cut out of the mountain without hands" is going to strike. I verily believe that the Messianic symbol set up by Moses in the wilderness was the serpent-circle upon the cross. And the true original tables of stone are not destroyed ; they are the two-fold indestructible tablets of the human mind. Does not St. John declare that Immanuel is God in the human mind ?

J. M. C.

#### EXTRACT OF LETTER FROM THEODORE GRIBI.

And now I want to say that I have enjoyed reading the last Magazine very much, which I did while at Stevens' Point. I have also read a portion of Dr. Mahan's Palmoni, and I must say that the subject of the wonderful numberer is an extraordinary feature. I have not had time to bestow on it study as the subject merits ; I have only rapidly glanced through Mahan and the article in the Magazine on the Grand Seal of the United States, but have seen sufficient to say that it is a wonderful, extraordinary feature of inspired writing, one into which I shall look further. It is impossible that the coincidences of numbers should be accidental, and it is equally impossible that they should be so by a conspiracy among and on the part of the writers of the various portions of the Bible. If this system of numbering holds throughout the Bible—and it seems to do so—it is a proof, such as no ridicule or skepticism can set aside, of the unconscious inspiration of the volume, *i. e.* that an intelligence which the writers were not conscious of guided their thoughts and chose their words. One scarcely knows what to say or think about it. It is a mystery, and yet it carries conviction with it. I wish I could obtain a copy of that work. Would it not pay to have a reprint of it? I shall look among the antiquarians of New York and Philadelphia for a copy.

Very truly yours,

THEO. GRIBI.

## LETTER FROM JACOB M. CLARK.

*Dear Sir*.—I notice that under the geometric division of the circle we have, practically, the sun's parallax in *hour arcs*  $= 4 + \frac{\pi}{4}$  which agrees very closely with your calculation of the amount in the STANDARD of March, 1883, with the difference only that the "radian," or analytical unit is  $\frac{180}{\pi}$ , instead of  $\frac{180}{\pi}$ , and, the arithmetic is decimal.

The sun's mean diameter in geometric miles being  $\frac{24000}{\pi} = 7639.44 \pm$ , the moon's

distance is  $= \frac{(4 + \frac{\pi}{4}) \times 10^6}{2 \times 3^2 = 54} = 88,618,482 \pm$  geometric miles  $= 10^7 \times$  the sun's parallax in Babylonian seconds of arc, very nearly. The latter result from a simple arithmetical law.

The *measure* of the parallax,  $4 + \frac{\pi}{4}$  is, of course, the perimeter of a square + length of quadrant of inscribed circle, diameter being 1.  $\pi$  appears under *positive* exponent 1.

54 is a prophetic number, and may not the *modulus* be 108 instead of 107.87+, as we do not know the moon's parallax or distance *exactly*?

The relations of diameters, parallaxes, mean distances and periodic times of the sun, moon and crescent, by this notation, look Pyramidal and simple.

Truly yours,

JACOB M. CLARK.

## LETTER FROM C. A. L. TOTTEN.

WASHINGTON, D. C., August 18.

M. S. HINMAN, Court of Common Pleas, Cleveland, Ohio.

*Dear Sir*: Yours at hand, forwarded me here. In reply I would state that the thirteens cover the seal in every direction. For instance:

- |                                  |   |                            |
|----------------------------------|---|----------------------------|
| Reverse as mentioned in the law. | { | 1. Annuit Coeptis.         |
|                                  |   | 2. Eye.                    |
|                                  |   | 3. Triangle.               |
|                                  |   | 4. Glory.                  |
|                                  |   | 5. Pyramid unfinished.     |
|                                  |   | 6. Date, 1776.             |
|                                  |   | 7. Novus ordo seclorum.    |
| Obverse as mentioned in law.     | { | 1. Crest.                  |
|                                  |   | 2. Motto, E Pluribus Unum. |
|                                  |   | 3. Eagle.                  |
|                                  |   | 4. Shield.                 |
|                                  |   | 5. Olive branch.           |
|                                  |   | 6. Bundle of arrows.       |

Besides all this there are numerous subordinate groups of thirteen, not as in the seal usually represented, but in its correct form. It has never yet been so cut as to do the grandeur of the idea justice. My history of the seal (if ever issued) will fully explain. My present idea is shown in the designs and in my book ('An Important Question'). The cuts are reproduced in the last Magazine. The topic is inexhaustible, so one might as well stop here as anywhere in a mere letter. I trust some day to be in Cleveland; if so, shall be happy to see you and explain more fully.

Yours sincerely,

C. A. L. TOTTEN.

## LETTER FROM C. PIAZZI SMYTH.

15 ROYAL TERRACE, EDINBURGH, August 15

*Dear Sir*: No sooner are my wife and self returned from our health-seeking tour, than an important package of INTERNATIONAL STANDARD literature has arrived from your-

self, together with your letter of July 31. This I have read, also the *Plain Dealer's* account, on July 30, of your last previous meeting of the Institute—a very full one, too, and yet a better one still is indicated for the next meeting. But my wife has already dipped ahead of me into the *STANDARD*, and besides being greatly struck with the excellence of Mr. Courtenay's grand letter, she sees such a communication from Rev. Mr. Wood, Sharon, Pennsylvania, that as to a lady's complaint "that you have nothing new in the journal now," she wonders whether the complainer had understood Mr. Wood's paper, and some of the others also.

I am certainly sorry that Mr. Searles has so severely criticised Mr. Courtenay, before he can have fully heard him. I certainly have a whole sheaf of letters from Mr. C. here, each one of which shows him to be a born mathematician, of immense energy and work, spite of Indian climate, high temperature and humidity to excessive saturation—a Christian of the finest type of New Testament faith, and then he is progressing continually. New horizons, conformable to Bible and Pyramid, are opening before him in so vast a scale that he cannot be expected to have the whole at his fingers' ends at once. Nor again, if they were still more perfect, would they necessarily agree with all Mr. Searles', or yours, or my ideas; but I am quite content to see an able man working up towards the light, for it will all come out right at last, when our Saviour, Lord Jesus Christ, appears again.

I have just been told of a book by a clergyman, who readily denounces the Great Pyramid as of the devil and no mistake. His method of proof is, "take its date, 2170. Subtract 1 from that number; then you have 2169. Add these numbers together horizontally and you have 18; then split the 18 into 6, 6, 6, and then you have it unveiled." That is the sort of book Mr. Searles should get hold of and show up the author thereof and convict him of his utter ignorance of 999 parts of the Great Pyramid's 1,000, and show up his tampering with the remaining 1.

Yours truly,

C. PIAZZI SMYTH.

P. S.—Janssen's letter is covertly pro-French metric; and unhappily some Londoners are in the same cause throwing similar dust into their own countrymen's eyes. Why not have the great dead General Grant for your next portrait. Englishmen may well work for such a one.

C. P. S.

#### EXTRACT OF LETTER FROM J. H. WELDON.

ASH HILL TOWERS, KILMALLOCK, August 29, 1885.

*Dear Sir* :—In the accompanying I have combined a reply to your letter with a few more observations on the United States Seal, which I hope will help to lead us all on to a better understanding of both sides. The report of one of your meetings does not state on what ground Judge McMath counts the arrows as six—not thirteen—for the generally received description says thirteen. I thought I gave full recognition to the fact of the thirteen, referring in the first instance to the number of the states, as the correspondence of number cannot be denied. But I think that should not debar me from looking for another 13, seeing that the 13 states or colonies could not be the *pluribus* of the motto, as I think I have very clearly proved. It seemed to me a very extraordinary idea to designate the seal "a remnant of barbarism," and "not a sign of civilization." When considering the mention of the seal by the prophet Jeremiah, and, as you instanced, in the case of Ahasuerus, I have always been led rather to wonder at the high state of civilization that led the people to the possession of such things in those early times.

Again thanking you, and hoping that some "accomplished 8x" will come forward and tell us something more, I am,

Yours sincerely,

J. H. WELDON.

## LETTER FROM J. H. WELDON.

ASH HILL TOWERS, KILMALLOCK, IRELAND, August, 1885.

*Dear Sir:* I am much obliged for the copies of your Magazine received, and for the trouble you have taken in illustrating the subject of my paper. There are a few errors which it is difficult to avoid, especially in the Hebrew, where some of the letters so strongly resemble others, but the figures are all correct.

In reply to your question, I wrote the article long before I saw your pamphlets and Dr. Wild's, but on obtaining the latter I extracted some information from it regarding the origin of the seal. I took my ideas from a study of the wood-cut that appeared in 'Our Rest' of January, 1882, in which the stars are represented in the form of a square with one star in the centre; these are surrounded by rays of light encircled by a cloud. It is precisely the same as appears on page 52 of your 'Battle of the Standards.' This design appears to be more in accordance with the heraldic description which I now copy from page 12 of your little book: "Over the head of the eagle, which appears above the escutcheon, a glory, *or*, breaking through a cloud proper, and surrounding thirteen stars, forming a constellation, *argent*, on an azure field." A full consideration of the above description of the crest makes the idea of the camp formation the more correct; for we have the brightness of the glory on the *inside* of the cloud, throwing light upon the camp, and illustrating, with unmistakable exactness, some of the most remarkable facts connected with the encampment and journeying of the Israelites through the wilderness. The change in this portion of the illustration at the head of my paper makes the subsequent remarks, on the quadrilateral arrangement of the stars, unintelligible; but what I have now written will explain.

Lieutenant Totten's design, on page 268, is, I must allow, very beautiful to look at, but I cannot approve of it, seeing that it is not in accordance with the heraldic description above quoted; nor do I like the notion of appearing to accommodate the seal to an idea, or, by any change of design, such as showing the rays of light on the *outside* of the cloud, or by making the Pyramid to consist of thirteen courses, thus altering what was actually laid down at the first, when, as you have so aptly expressed it, "men wrought wiser than they knew." Similar remarks apply to the design of the centennial medal.

Allow me, now, to add a few more coincidences of texts and numbers in further support of cabalistic interpretation, and to show the frequent occurrence of the number 153. Referring to the glory surrounding the all-seeing eye, we read in Ex. xvi., 7, addressed to the Israelites, "Ye shall see the glory of the Lord." The Hebrew words meaning "the glory of the Lord" make 459, or three times 153. In Matt. v., 14, our Lord says, "Ye are the light of the world," *humeis este to phos ton kosmon*, which is equal to  $655 + 510 + 370 + 1500 + 770 + 800 = 4605 = 5 \times 1535$ . Take the whole of the ninth verse of the first chapter of Hosea: "Then, said God, call his name Lo-ammi, for ye are not my people and I will not be your God." In this verse, consisting of thirteen Hebrew words, their values respectively are  $257 + 301 + 346 + 31 + 120 + 30 + 1001 + 31 + 120 + 87 + 31 + 21 + 650 = 3026$ , which divided by 2 gives 1513.

The following I take from the foot of page 18 of your book on the seal, which gives the ninth of September, 1776, as the day on which the union was declared to be the United States of America. Now, if we count up the days from the first of January in that year, we shall find the ninth of September to be the 253d day. It is indeed remarkable how frequently this 53 is noticeable. In the term applied to Israel, "The strong people," *ho laos ho ptochos*, is equal to  $70 + 301 + 70 + 2050 = 47$  times 53; whilst *ptochos* taken alone is equal to 7 times 53. "The dispersed among the Greeks," *ha diaspora ton Hellenon*, shows  $8 + 466 + 1150 + 973 = 2597$ , or 49 times 53. Jezreel is value for 318, or 53 multiplied by 7 and 8; and if we take from Hos. i., 11, the Hebrew of the words, "for great shall be the day of Jezreel," we find their sum to be 1007, or 19 times 53. Let us now turn again to the thirty-fourth chapter of Numbers and take from the Douay, or Latin ver-

sion, the names of the tribes, putting down the value of the Roman numerals contained in each name, and treating them as we did our extract from the Greek, at page 216 of your July number, and we see that the sum of the several figures comprising those numbers is exactly 53.

Ruben .....	V	5	5
Gad .....	D	500	5
Manasse .....	M	1000	1
Juda .....	DVI	506	11
Simeon .....	MI	1001	2
Benjamin .....	MII	1002	3
Dan .....	D	500	5
Joseph .....	I	1	1
Ephraim .....	MI	1001	2
Zebulon .....	LV	55	10
Issachar .....	CI	101	2
Aser .....			
Nephthali .....	LI	51	6
		5723	52

And if we take the total of the whole, which is 5723, we find the sum of these figures to be 17, the number expressive of God's people. In further agreement with this observation of St. Augustine, to which you have referred, we have in Is., li. 2.

The redeemed of the Lord producing 136, which is equivalent to 8 times 17. And here it is worthy of remark, that the sum of the first 17 numbers is equal to 153; and 17 multiplied by 9, or the square of 3, also produces 153.

I was very much interested in your book, especially your reference to the 12 and 13 letters in *annuit captis*, which I think very significant; and to the 17 letters in the other motto, both of which had escaped my observation. I refrained from noticing them in my former paper, preferring that it should appear in its original state. But now, when considering this 12 and 13, I fancy I see the same idea reflected in the quadrangular formation of the stars already referred to, and I fancy also that the star arrangement, as primarily representing the 13 states which in 1776 formed the nucleus of this now great Nation, is that particular portion of the entire design to which the motto, *annuit captis*, most especially refers.

I observe that this cabalistic system is applicable to words and sentences in Hebrew, Greek and Latin—the three languages in which the superscription on the cross was written. But the English language is a compound of all three. May we not, therefore, try whether the system may be applicable to it also? Let us, as we are on the subject, take the words, "THE UNITED STATES." Here the value of the Roman numerals is 506, which is twice 253; and for Great Britain write down "THE UNITED KINGDOM." 506 + 1501 = 2007, which does not bring out the expected number. But if we add its value to that of "the United States"—in other words, if we write Ephraim and Manasseh—the result is

$$\begin{array}{r} 506 \\ 2007 \\ \hline 2513 \end{array}$$

and the three figures are produced.

Take now "GREAT BRITAIN AND IRELAND,"

$$\begin{array}{r} \text{add} \quad 2 \quad 500 \quad 551 \\ 2 \\ 500 \\ 551 \\ \hline 1053 \\ \dots \end{array}$$

and see again the inevitable figures contained in the result. Once more let us try it on the fuller and more comprehensive name,

"THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND."

$$\begin{array}{r}
 506 \quad 1501 \quad 2 \quad 500 \quad 551 \\
 506 \\
 1501 \\
 2 \\
 500 \\
 551 \\
 \hline
 20 \overline{)3060}
 \end{array}$$

Divided by 20)3060 and we have the real number,

153

And as we are on the subject of Great Britain, I shall conclude by repeating the two following numerical coincidences which I have before now remarked regarding the union of Ireland with that country. If we add together the values of

$$\begin{array}{r}
 \text{ENGLAND} = 550 \\
 \text{SCOTLAND} = 650 \\
 \text{WALES} = 50 \\
 \hline
 1250 \\
 \text{IRELAND} = 551 \\
 \hline
 \end{array}$$

we see in the total 1801 the year in which on the 1st of January the union took place, the imperial standard having been formally hoisted on Dublin Castle on that day. And the numerals in the words ENGLAND UNITED WITH SCOTLAND point to the year 1707 as that in which the union of those two countries took place.

Here I shall conclude, requesting my readers to observe that these examples are not put forward as proofs or evidences of the Anglo-Israel theory. They are given merely as coincidences or facts which will go far to show that there is, perhaps, more in the cabbala than persons who have not given the subject their attention would be inclined to believe. I am, dear sir,

Ash Hill Towers, Kilmallock, Ireland,  
August, 1885.

Yours faithfully,  
J. H. WELDON.

#### EXTRACT OF LETTER FROM CHARLES FERGUSON GARLAND.

PUBLIC SCHOOLS, NELSON'S PLAINS, NEW SOUTH WALES, AUSTRALIA,

August 8, 1885.

*Dear Sir:*—I must now tell you how I came to know anything about the excellent institution of which you are the honored president. It was on this wise. Some three or four years ago I espoused the cause of the Anglo-Israelite theory, on conviction, and bought several books bearing on the theory; among others, those on the Great Pyramid by Professor C. Piazzi Smyth, Dr. Seiss and Mr. Charles Casey. All of these I perused carefully, and was surprised and gratified to find how our weights and measures were verified by the Great Pyramid, as against the atheistical methods of reckoning used by continental nations, more especially that of France, which has some advocates both in the United States and Great Britain who would thrust the "metric system" upon the people whether they liked it or not. But God will vindicate his cause. Your excellent institute was brought under my notice by perusing a pamphlet, of which you are the author, on the subject of weights and measures, called the "Battle of the Standards," which I perused carefully, with much pleasure and profit—pleasure, at finding that amidst the gloom there are some who are working for the maintenance of our present system of God-given weights and measures; profit, because of the increase of information which a perusal of books on this subject gives of things going on around us.

I find a pleasure in teaching our present system of weights and measures, having the belief that they are God-given. This is, I believe, one of the many marks by which God identifies the Anglo-Saxon race, as being his chosen vessel to work out his will.

I remain, yours faithfully,

CHARLES FERGUSON GARLAND.

#### LETTER FROM REBECCA N. HAZARD.

KIRKWOOD, August 12, 1885.

*Dear Sir:*—Your letter of the 4th inst. was received, in which you ask for my opinion of the last chapter of the "Unveiling of Isis." I was much interested in it, as I have been in all the other chapters. Being especially interested in this phase of your work, it has given me pleasure to note with what persistent effort you have unfolded truth after truth, making a chain of evidence strong enough to convince the most skeptical. I notice you think of publishing your studies on this subject in book form, and if you do I wish to subscribe for a copy. I have not seen the book you speak of, *viz*; the "Mysteries of Isis," but would much like to see it, as everything on that subject interests me. By the way, did you notice that Bartholdi's Statue of Liberty arrived in New York harbor on the anniversary of the battle of Bunker Hill, and that it was formally received on *Friday, the 19th of June*. The 19th of June, 1770, is, I believe, the day on which—Swedenborg says—the angels in the spiritual world received their commission to establish the kingdom of God upon earth, which kingdom you and I believe to have been the United States. You probably observed also that the Liberty Bell started on its mission of peace to the South on *Friday*. These may be coincidences, but they are pleasing ones. I was much interested in Mr. Weldon's article on the United States Seal. He gives some striking facts in regard to its symbolism. I have long been anxious to see Lieut. Totten's book on that subject. Now, in regard to the lotus flower, I think your suggestion a good one, but we should have to call it simply the "water lily," for it is surprising to note the amount of prejudice that is felt toward everything Egyptian. I could but think of this when I saw a letter from a correspondent in your Magazine in which the *Crux Anсата* is mentioned as an "obscene symbol." This almost irritated me, for I knew it was to those early people a most sacred and holy emblem. As regards the lotus, it was probably chosen as an emblem of life on account of its great fertility and self-propagating qualities, and this it has in common with all the water lily family. The *Nymphaea Lotea* differs but little from the *Nelumbians* and some other species. You say the former is found at Monroe, Michigan. I have heard it is found at one place in the South, I think in Alabama. Have you ever thought that the celebrated Pythagorean injunction, "eat no beans," probably related to the lotus, and was a command not to profane that which was holy? But this subject swells beyond the limits of a letter. Wishing you all success in your work, I am,

Very truly and cordially yours,

REBECCA N. HAZARD.

#### EXTRACT OF LETTER FROM COLONEL A. T. FRASER.

TRICHINOPOLY, July 25.

*Dear Sir:* I am of opinion, somehow, that there is a fallacious calm in Egypt just now, and that when the river rises the tribes will either try to divert it or pour down into Lower Egypt in immense numbers, and that there will be a movement of Russia, but not on this country, as any expectation there was of revolution among the natives was defeated,



as they will not have the Russians and their rule at any price, and we have an almost impregnable frontier at the Indus, which an army cannot wade across. The Afghans decided they could defend themselves, and as the country will not support a number of Europeans, it is closed to everybody, unless they want to waste their national resources, and in this way there has been no loss of even prestige. In the event of the expedition undertaking additional researches at the Great Pyramid, it is very desirable that some one sketch out what has to be done, and the order of working, and important to distinguish what remains to be explored, from the accessible places already exhaustively measured by Mr. Flinders Petrie most recently. The chart shows what a large proportion of the bulk is mapped out to be solid, when the probability is that there are other chambers.

Dr. Grant, at Cairo, showed me a very large roll of measured plans of the galleries, containing a number of joints that had not been published, as far as I know, and he said the Great Pyramid was full of marks of which no one could make out the meaning. They must have been mostly his own and Mr. Waynman Dixon's plans. When I was there, in 1881, I lived at Shepherd's hotel, in Cairo, and rode a donkey out, carrying my lunch and remaining till evening. Mr. Flinders Petrie was in a tomb on the spot, and had provisions sent out from Cairo. I would never think of living at Shepherd's if I were doing work at the Great Pyramid. The road is bad for driving, and long, and there is so much noise and interruption at the hotel, though it was comfortable enough. The tombs would not accommodate a number, and there is no other shelter. The only way would be to use tents as we do in India, double roofed, with an air space between to keep out the sun. One large, double poled tent would do for several persons to dine and work in, and they would each require a small ten foot tent as a bedroom, and merely the commonest and coarsest articles of camp furniture, because any beyond this would invite theft, and the less luxury the more work. A collection of books of reference would be very desirable. The grub in Egypt is only middling, but there is no difficulty, or used not to be, in getting what is wanted from Cairo, so that beyond the tents and the equipment there need be very little cost for mere living when once there. House accommodation is probably dear and scarce in Cairo. English measures and weights, that is, multiples of the foot and pound, are in established use all over India. The yard is very common, being twice the cubit from the tips of the fingers to the elbow, which is the way they sell cloth among themselves. They will never take to the French metric system. I remain,

Yours sincerely,

A. T. FRASER.

## THE EMPTY COFFER.

[The following poem comes at the moment of closing the Magazine. It is an inspiration.]—Ed.

Speak, silent stone ! I stand before thee awed,  
Longing to read the secrets thou hast held  
Ages on ages, since an unknown hand  
Closed the dark chamber of thy solemn state,  
And sealed the door, and set to watch thee there  
That dread Oblivion, whose potent spell  
Casts blindness o'er the eyes of passers-by  
Until "the fulness of the time" do come.  
Speak, silent stone ! if yet the hour draws nigh  
When thy grim mystery must be unlocked,  
And the far past flash on our gaze, illumed—  
At whose command, or by what master touch,  
With more than human skill and power imbued,  
Wast thou, in nice proportion marvelous,  
And glossy fair, from the rough mass evolved ?  
Why all this seeming waste of workmanship ?  
Were gold and precious jewels buried here ?  
Was this the tomb of Egypt's greatest king,  
And thou the casket ? Or, more honored still,  
Guard'st thou, indeed, the bones of Israel's son,  
Himself, perchance, th' inspired architect ?  
O, listen ! while I question yet again,  
And lowly bow, to seek His will divine,  
By whom were all things made in heaven and earth.  
Has God, the Infinite, a message here,  
In thee close folded through the centuries,  
Ready to be revealed in these last times ?  
Ah, then ! no vandal hordes, on spoil intent,  
Bursting thy sacred walls with impious hand,  
Could wrest from thee the lesson, premature ;  
Nor yet can unbelief retard the day  
Of its revelation. Then be ours the task  
Patient to listen for the voice divine.  
Speak, silent stone ! I wait the auspicious dawn.

—LUCY E. DOW.

TRANSACTIONS OF THE OHIO AUXILIARY SOCIETY OF THE INTERNATIONAL INSTITUTE.

JULY 15, 1885.

J. M. Case of Chicago, Ill.; Charles E. Fogg of Poughkeepsie, N. Y., and Thomas Young, England, were elected members.

With regard to the discussion on the United States seal Lieutenant Totten wrote: "The law without a breach recognizes the seal just as it was by the original law of 1782. The arrows are thirteen and not six. Webster had a die made with six, but it was a pure assumption of authority. It is now corrected in the new dies to thirteen. It is true there was no seal before 1782, but on June 20th of that year the last of several committees that had worked continuously from July 4, 1776, completed their labors and the present one was recognized and formally adopted."

It was asserted by Judge McMath at the last meeting that the United States of America had, strictly speaking, no seal; that the seal was adopted before the adoption of the constitution, and that, therefore, at the time of the adoption of the seal there was no government of the United States. Mr. Latimer said that if we had no seal we had no flag. The flag was adopted on the 17th of June, 1777, but he claimed that the government began long before the adoption of the seal or the flag, on the 4th of July, 1776, if not on the 7th of September, 1774, the date of the first prayer in congress.

After some discussion upon this subject, the president read a paper from Mr. Theodore Gribi of Elgin, Ill., entitled, "Is the Great Pyramid of Antediluvian Origin?" This is a review of a work, "Finis Pyramidis," written by Rev. Thomas Gabb, a Roman Catholic priest, and printed in London in 1805.

The president acknowledged the receipt of papers for "THE INTERNATIONAL STANDARD," from Mr. J. K. Hornish and Mr. Jacob M. Clark, after which the society adjourned for two weeks.

JULY 29TH.

Henry J. Marten, C. E., Wolverhampton, England, and Joseph Wild, Bay Ridge, L. I., were elected members. After the business of the evening had been disposed of, the following resolution touching the death of General Grant was presented by Messrs. R. D. Noble, A. M. Searles and James Lawrence, and unanimously adopted:

"WHEREAS, Since the last meeting of this Institute, mankind has been called to mourn the loss of the honored statesman and distinguished chieftain, Ulysses Simpson Grant; therefore

"Resolved by the International Institute for the Preservation of Weights and Measures, the principles of which were approved by him, That in the death of General Grant the civilized world, bowing in humble submission to the decree of Divine Providence, recognizes the departure of one who was a Christian gentleman, who was wise and just in statesmanship, and whose unsurpassed military genius, by which he became the great conqueror of the age, was only equaled by the humanity and magnanimity that characterized him in the crowning of his military career."

A paper delivered before the Society of Civil Engineers in London, England, entitled, "A Comparison of British and Metric Measures," was read by Mr. Latimer. The writer, Mr. Arthur Hamilton Smythe, favors the metric system. Some of the arguments presented by the engineers on both sides of the question were also read.

Pamphlets sent by Mr. Charles de Medici of New York, entitled, "The Medician

Theorem," were distributed to members, and his paper upon "The Sacred Cubit" was read by Mr. Latimer.

The papers of Mr. Hornish and Mr. Jacob M. Clark were held over for another meeting. The president acknowledged the receipt of a pamphlet from Mr. Sanford Fleming on universal or cosmic time.

SEPTEMBER 9th, 1885.

The following persons were elected to membership: William S. Righter, Rev. David Fraser, Rev. James P. Wilson, Rev. J. Clement French, Rev. Ray Palmer, D. D., and Rev. J. F. Stearns, D. D., of Newark, N. J.; Charles H. Miller, Galion, O.; Aurelia Burrage, Gardener, Mass.; Rev. D. H. Mueller, D. D., and George Deming, Cleveland; D. L. King, Akron, O.; James Stewart, St. Andrews, Manitoba; Vincent E. Gregg, C. E., Cleveland.

Letters were read from Professor Piazzi Smith, astronomer royal, Edinburgh; J. H. Weldon, Kilmallock, Ireland; Col. A. T. Fraser, Trichinopoly, India, and R. Courtenay, Tanna, India.

A very interesting paper from Mr. Courtenay was also read and discussed on "The Core Masonry of the Great Pyramid."

## RECEIPTS FROM SUBSCRIBERS TO "THE INTERNATIONAL STANDARD" FROM JULY 19 TO SEPTEMBER 23.

July.—Bureau of Education, \$2.00; Thomas Young, \$4.87; Henry J. Marten, \$1.99; C. T. Heisel, \$2.00; J. W. Willard, \$2.00; R. D. Noble, \$2.00. Total, \$14.86.

August.—Justin Holland, for three copies, 90 cents; Aurelia Burrage, \$2.00; Mrs. D. White, \$2.00; J. H. Weldon, \$2.00; S. G. Arnold, \$2.00; M. S. Hinman, \$2.00; Fred C. Weir, \$2.00; A. W. Jones, \$2.00; George M. Cox, \$2.00; R. B. Murray, \$2.00.

September.—Mrs. Thomas Basnett, \$2.00; John Heard, \$2.00; R. Courtenay, \$4.81; Edward G. Tyrrell, \$2.00; S. H. Reeve, \$2.00; J. W. Kelly, \$2.00; Miss H. F. James, \$2.00; A. W. Jones, \$2.00; Mrs. J. Minturn, \$2.00; D. L. King, \$2.00; O. W. Kyle, \$4.00; Charles F. Garland, \$9.62.

## EDITORIAL NOTES.

TO THE MEMBERS OF THE INTERNATIONAL INSTITUTE:

*Dear Friends* :—We propose to hold our annual meeting this year in New York, as we have there a branch society and a large number of members. Unless circumstances occur to prevent it, the meeting will be held according to our usual custom on the 8th day of November. Notice of place of meeting will be given hereafter.

The reports of the committee on weights and measures should all be prepared in time for discussion on that occasion.

We beg that members who propose to furnish papers will notify us as soon as possible, and give us the heads of their subject. We hope that all who can possibly attend will do so. We want to have a gathering of all the Pyramid students of this country and some from abroad.

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TO THE MEMBERS OF THE INTERNATIONAL INSTITUTE:

*Dear Friends* :—We are compelled to come before you with an appeal for aid. We regret to state that our Magazine does not pay its expenses. We have six hundred and fifteen members, but they are not all paying members. It would require four dollars per member to sustain the Magazine.

In most societies the members are liable to assessment. Ours are not. And so far the burden of meeting all deficiencies has been borne by one. This has been done cheerfully, without hope of reward or return. Two thousand members or subscribers would sustain the Magazine liberally and enable us to advance its character in every way; or, if two hundred would guarantee ten dollars per annum each, we could establish the publication on a strong basis. If those who have not means to contribute would each send us the name of an additional

subscriber it would materially assist us; and we would ask those who have abundant means to subscribe for one or more of their friends and have the Magazine sent them. Those who are imbued with the truths that we are advocating feel that it is important to the cause that our Magazine should be sustained. Many literary men have assured us that it is second to none in the amount of original and instructive matter that it publishes. Upon every side we are assured that it should make a brilliant success from its own inherent merit.

Many responded liberally to our appeal for aid last year and others have since contributed generously. We do not ask assistance from them, but we beg that those who have not hitherto aided us will now do what they can.

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#### SPIRIT VOICES.

The editor of Spirit Voices has lately given a valuable notice of our Magazine in his paper, and desires a reciprocation. He says that he cannot agree with all the theories advanced by our writers. We could not expect him to do so, for many of them are untried and suggestive only, but the foundation is truth, and an honest search for it is being made. While we believe that the generous editor of Spirit Voices and the advocates of modern Spiritualism are actuated by the same motive, an earnest search for truth, we must express our dissent from many of the theories advanced by them as courteously as the editor has dissented from ours.

The writer has made a study of this subject in all its phases, and is not a disbeliever in spiritual manifestation. He has endeavored for years to analyze and understand the movement, and test whether its fruit be good or evil. He can produce many remarkable phenomena himself.

A gentleman of high standing in one of the largest cities of the country said to him one day, in reply to a question upon another matter, "I am investigating a subject of far greater importance."

"What is it?" asked the writer.

"The immortality of the soul," he replied with emphasis, "and I will prove it by modern Spiritualism."

"I am rather surprised that you should think this necessary," answered the writer, and beginning at Moses and the prophets he sketched many of the incidents illustrating ancient Spiritualism—the three angels who appeared at Abraham's tent, the angel who appeared to Manoah and his wife, the raising of Samuel by the woman at Endor, appearance at the crucifixion of many of the dead walking about the streets of Jerusalem in their grave clothes, and the visible presence of our Saviour for forty days after his resurrection.

"Where do you find all this?" asked the Spiritualist.

"In the Scriptures," replied the writer.

"That is new to me," he answered.

And the modern Spiritualists who deny the truths of Christianity are equally as unacquainted with the Scriptures. They do not study Moses and the prophets, and are not aware that they will find in the Scriptures spiritual manifestations more wonderful than any that they claim to produce.

We do not deny the wonderful nature of many of these phenomena. It is folly to assert that they are produced by fraudulent means. But we would ask, "Is this power of God or is it of Satan?" Has modern Spiritualism soothed the dying bed? Has it eased the troubled conscience? Has it made men higher or purer in life? Has it helped the poor and needy? To us it appears cold, frigid, intellectual only, without one particle of heart amid its wonderful manifestations. It rejects the faith that has made our country glorious and has brought it to its present states of civilization.

These manifestations are evidences of a great revolution in the affairs of mankind. They were rife in the time of Saul, when a great catastrophe occurred to the kingdom of Israel; they were rife at the time of the coming of Christ; they were rife when the united colonies of New England arose, and the colonists looked for the second coming of the Messiah; at the beginning of the war of slavery, and they are rife now. Hence, many have left the religion of their fathers, have denied the inspiration of the Scriptures and have gone to seek strange

doctrines. We believe that Spiritualism is one of the questions of the day, and it demands investigation ; but modern Spiritualism appears like the religion of the French in the time of the Revolution, the worship of God is left out, and the Son of God rejected. He, the man of sorrows and acquainted with grief, is despised. But He foretold of these dreadful days now so close upon us.

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We wish to call the attention of our readers to the fact that we have on hand a number of charts of the Great Pyramid. The plan was drawn by Mr. A. A. Honsberg, one of the first draughtsmen of the country. It exhibits very clearly the proportions and method of construction of the Great Pyramid. A drawing was first made in Pyramid inches on a scale of 100th of an inch to the foot. But Mr. J. Ralston Skinner of Cincinnati begged us to construct it according to the measure of the British inch. Mr. Skinner believes that the British inch of to-day is the original exact length handed down from generation to generation, and mysteriously preserved intact and exact through thousands of years. We at first combatted Mr. Skinner's theory, but after a lengthy examination we made a discovery of an important character, put forward in the paper *What is the Pyramid Inch?* Vol. 2, No 3. This convinced us that Mr. Skinner was right, and the chart was constructed with the use of British measures. We propose in our next to give a plan of the chart with the measures thereof, taken from Mr. Skinner's 'Crown Jewels.'

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We have received from Mr. V. M. Cox a copy of this pamphlet "Ephraim-Israel, the Pivot Nation of Prophecy and History," being a lecture delivered before the Metropolitan Anglo-Israel association on January 14, 1885. From this we quote the opening paragraph :

"A thoughtful and unprejudiced student of Holy Writ, one who comes in humility and simplicity to the inspired page of



God's sacred Word, prepared to accept its assertions as incontrovertible, and its predictions as infallibly certain of fulfilment, must inevitably arrive at one definite conclusion—namely, that in all Biblical history there is one central theme, in all prophecy one central design, and in all the workings of providence one central purpose—or it may be said two, yet the two so indissolubly associated and connected that it is impossible to separate them, or to speak of either, without in some measure involving the other. They are, the mission and ministry of Israel's Messiah and the history and destiny of that elect nation whom He came to redeem, and over whom He will return to reign gloriously. It is with that nation that this short paper is principally concerned, and hence its distinctive title, 'Israel, the Pivot Nation of the Bible.'"

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## REVIEWS.

'INTIMATE CONNECTION BETWEEN GRAVITATION AND THE SOLAR PARALLAX.' By Thomas Bassnett.

We have before us a pamphlet of 16 pages by Professor Thomas Bassnett. Professor Bassnett says: "When it is remembered that all the time, labor and money spent on the great question of the solar parallax amounts to many millions of dollars, and that this money has been paid and much will yet have to be paid by the unscientific, it seems the people ought to know something about the matter, and in this humble essay I feel it a duty to show how all this labor and money has been needlessly thrown away, as every planet in the system has stamped upon its disc, by its sidereal period, the value of the solar parallax, differing very little from the value obtained by Bessel from the transit of Venus in 1769, which gave 8.578. This theory gives 8.550, and is fortified by its intimate connection with a general law, from which gravitation proceeds. We will first, then, bring forward an important feature in the motions of the planets, hitherto unknown and unsuspected, and afterwards show the *raison d'être* for such a re-

lation. Taking the mean distances of the planets as the radii of so many circular orbits, then we find that the following law obtains throughout the solar system: *The orbit velocity of each planet in miles multiplied by the time in seconds which a ray of light takes to pass from the sun to that planet is directly as the square root of that planet's distance from the sun in miles.* The sidereal periods of the planets are accurately determined by observation. The mean distances depend on the solar parallax, which is now as uncertain as it was fifty years ago." The distance of the earth from the sun is given in Professor Bassnett's table as 95,693,000; square root of the mean distance in miles, 9,782.3; orbit velocity in miles, 19.0524; and the time for light to pass from the sun, in seconds, 513.585. Now, the first essential is to have the distance of a body from the sun for the purpose of determining the orbit, and without the correct distance we have no correct orbit; hence we have no means of obtaining the orbit velocity. If we have the length of the orbit of a body we simply divide that by the number of seconds in a year. This gives the distance that the body moves in one second of time. We beg Professor Basnett to prepare us a brief paper for the next Magazine.

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'The Coming Age: Its Nature and Proximity.' Price \$3.00. Send to C. H. Jones, 77 Clark street, Chicago, Ill.; to the *Restitution*, Plymouth, Ind.; or to J. P. Weethee, Millfield, Athens county, O.

'The Gospel According to St. Matthew.' Translated from the Greek text of Constantius De Tischendorf and other standard textual authorities. By Charles Gardner, M. A. Printed on extra heavy, tinted paper, elegant cloth binding. Postpaid, only sixty cents. C. H. Jones, 77 Clark street, Chicago, Ill.

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'The Number Counted 666, and the Name Counted 888.' By the Rev. James Upjohn. These books investigate the numerical value of names in the Hebrew Scriptures; they are companion volumes, price one dollar each. They will be sent, postage paid, by remitting the price to Rev. James A. Upjohn, Neenah, Wisconsin.

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'The Waters Above the Firmament, or the Earth's Annular System.' Address Isaac N. Vail, Barnesville, Belmont county, Ohio.

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*The Messenger*—A weekly journal devoted to the elucidation of prophecy and the identification of the British nation with the house of Israel, God's chosen people, his inheritance. Edited by Annis Unwin, 84 Oxford street, Sheffield, England, and published by John Heywood, 11 Paternoster Buildings, London, E. C., England. Yearly subscription, 10s. 10d.

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*The Banner of Israel*—A weekly paper advocating the identity. Edited by Philo Israel and printed by Robert Banks & Son, Racquet court, Fleet street, London, E. C., England. Annual subscription for one copy weekly, including twelve double numbers, post free, 7s. 6d.

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Israel's Hope and Destiny—This magazine, which has been published for five years as a monthly, will henceforth appear as a quarterly. It advocates the identification of the Anglo-Saxon race with the house of Israel. The editor is Douglas A. Onslow, J. P.; publisher, Robert Banks, Racquet court, Fleet street, London England.

# The International Standard.

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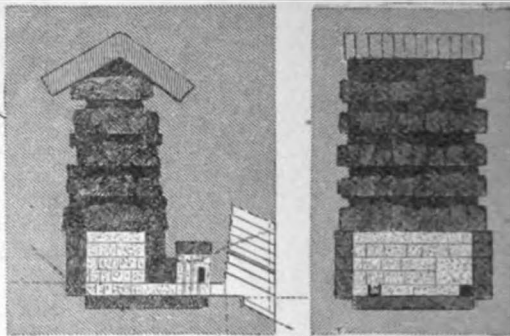
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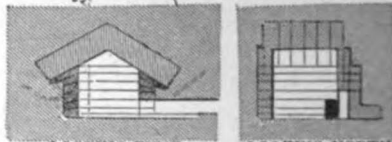
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Vertical Sections of King's Chamber, Ante-chamber & South end of Grand Gallery  
LOOKING WEST LOOKING NORTH.

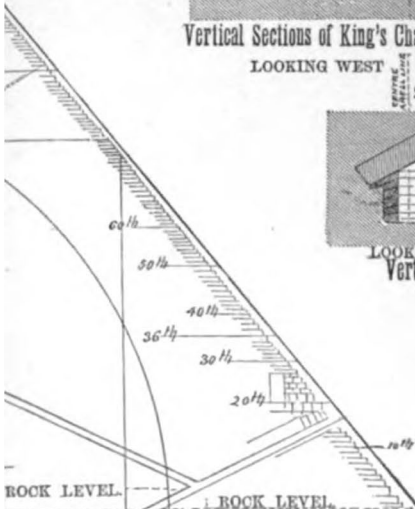
Scale for these five Sections:  $\frac{3}{32}$  inch 1 foot.



LOOKING WEST LOOKING NORTH  
Vertical Sections of Queen's Chamber.



LOOKING EAST.

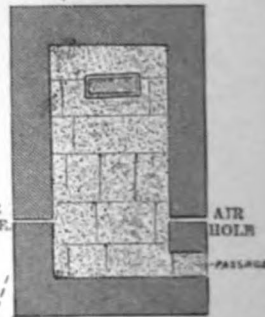


LEVELED ROCK.



THE COFFER.

Scale:  $\frac{18}{32}$  inch 1 foot. AIR HOLE.



Plan of King's Chamber.

Scale:  $\frac{1}{32}$  inch 1 foot.

